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DATE: March 24, 1995
TO: Greg Powell, U.S. EPA/ERT Work Assignment Manager
THROUGH: John N. Dougherty, REAC Geosciences Group Leader
FROM: Ray Lewis, REAC Task Leader
SUBJECT: PIER DRUM, BRADENTON, FL
WORK ASSIGNMENT 0-098-TRIP REPORT

RMS for J. Dougherty

S.T. for R.L.

1.0 INTRODUCTION AND BACKGROUND

The U.S. Environmental Protection Agency (U.S.EPA) Region IV requested that the U.S. EPA/Environmental Response Team (ERT) conduct a geophysical survey to search for buried drums and collect and analyze soil, groundwater, surface water, and drum samples at the Pier Drum site in Bradenton, FL. The ERT activated the Response Engineering and Analytical Contract (REAC) on December 30, 1994, under Work Assignment 0-098, to provide personnel and equipment for a geophysical survey and drum, water, and soil sampling and analysis. Sam Getty, Michael Morganti, and Ray Lewis completed the sampling effort, and Stewart Sandberg and Jyotiranjana Kar performed the geophysical survey.

1.1 Site Description

The Pier Drum site is located in Bradenton Township, Manatee County, FL. The site is approximately 12 acres in size and is in a rural setting. Most of the property is open field, with a barn and sheds along the south side (Figure 1). In November 1994, the Florida Department of Environmental Protection (DEP) excavated 16 drums from two pits in the southeast corner of the site (Figure 2). The drums remain on-site near the excavation pits. The open pits subsequently filled with water, either from rain or groundwater or a combination of both.

1.2 Observations and Activities

Groundwater, surface water, sediment, and drum samples were collected during this sampling effort. In addition, geophysical monitoring and topographical surveying were conducted. Field work began on Monday, January 9, 1995 and concluded on Friday, January 13, 1995.



2.0 METHODOLOGY

2.1 Sampling Activities

For all of the sampling activities, sample documentation was completed in accordance with ERT/REAC SOP # 2002, Sample Documentation, and ERT/REAC SOP # 4010, Chain of Custody (COC). The packaging and shipment of samples was completed in accordance with ERT/REAC SOP # 2004, Sample Packaging and Shipment. Field data sheets and COCs are provided in Appendix A.

2.1.1 Drum Sampling

Drums were sampled after they were opened with non-sparking beryllium tools. Samples were collected utilizing glass drum thieves and deposited into 32-oz glass jars for field screening. Drum samples were collected in accordance with ERT/REAC SOP # 2009, Drum Sampling. Drum samples were referenced according to the REAC's numbering system (REAC#1 through REAC#16) and the sample numbers correspond to Florida DEP numbers. Drums REAC#6, REAC#15, and REAC#16 could not be opened because they were filled to the top and the contents had solidified; therefore, they were not sampled. Drum REAC#12 was not sampled upon the instruction of the work assignment manager because it has the same contents as drum REAC#10.

2.1.2 Chemical Categorization Screening

Upon completion of the initial sampling, drum samples were chemically categorized using the Sensidyne Haztech™ Hazcat Kit (Hazcat) quick test methods. Quick test methods include the following individual tests: water reactivity/solubility, hairpin explosivity, oxidizer, acid/base pH, cyanide, chlorine hot wire, and organic peroxide. Samples which showed a positive response to the chlorine hot wire test were also screened with Chemetrics™ Quantichlor Chlorine in Waste Oil and Dexsil™ Chlorine in oil PCB test kits.

Each sample was tested for ignitability prior to the chemical testing with an Erdco™ Setaflash Flash Point Tester (Setaflash). The Setaflash was set at 140 degrees Fahrenheit (°F) in order to characterize the sample as ignitable under Resource Conservation and Recovery Act (RCRA) regulations.

Samples were also characterized using a Spil-fyter™ Chemical test strip. Spil-fyter Chemical test strip consists of five colorimetric tests: an acid/base risk test; an oxidizer risk test; a fluoride risk test; an organic solvent/petroleum distillate risk test; and an iodine, bromine, and chloride risk test.

Upon completion of chemical categorization screening, six composite samples were sent out for further laboratory analyses. Composite samples 00911, 00915, and 00916 were sent for TCLP VOA, TCLP BNA, TCLP PCB/Pesticides, and TCLP Metals analyses. Samples 00912, 00913, and 00914 were split and sent to two different laboratories for TCL VOC, BNA, and PEST/PCB, TAL metals, percent moisture, percent sulfur, percent chlorine, British Thermal Units (BTU), and ash content analyses.

The following is a description of the field tests that were used to characterize the samples.

Water Reactive/Solubility Test:

A small amount of sample was added to 1/2 inch of water in a test tube. If the sample did not effervesce, a stopper was placed in the test tube. The test tube was then shaken vigorously. After allowing time for a reaction to occur, the results were recorded. This test determined whether a sample is water reactive or soluble in water.

Oxidizer Test:

Two or three drops of acid test solution were placed on the oxidizer test paper and the sample was touched with the paper. An oxidizer turns the paper blue to black. If the test was positive, the pH of the sample was tested. If the pH was less than or equal to 2, the sample was classified as an oxidizer and no other tests needed to be performed. If the pH was greater than 2, the sample was tested for ignitability.

If the sample was ignitable, then it was classified as an organic peroxide. If it failed the ignitability test, the sample was classified as an oxidizer.

If the oxidizer test proved negative, the pH of the sample was tested. Samples with a pH greater than or equal to 12 were tested for CN⁻. If the pH was between 2.5 and 12, the sample was tested for ignitability. For a pH less than 2.5, the sample was classified as an acid and the test ended.

Ignitability Tests:

The following tests were performed to determine the ignitability of the sample:

• Hairpin Test:

The hairpin test is a test for explosiveness. A grain-size solid or a drop of liquid sample was placed on a watch glass. A hairpin was heated until red hot, and then touched to the sample. If the sample ignited into flames, the sample was classified as an explosive.

If there was no reaction from the hairpin test, a lit match was used to ignite the liquid in a watch glass.

Observations:	Extremely Flammable:	Flame jumps from match to liquid.
	Flammable:	Stays ignited after removing match.
	Combustible:	Requires match as a wick.
	Non-Flammable:	Will not ignite.

- Setaflash Test:

The Setaflash tester was set at 140 °F in order to characterize the liquid as ignitable under RCRA regulations. A small amount of each sample was placed into the chamber of the instrument and heated to 140°F. Once the sample amount reached 140°F, a flame was introduced to the headspace of the chamber. If a flash occurred, the sample was characterized as ignitable. The results were recorded in the log book as "flash" or "no-flash," with flash indicating that the sample was ignitable.

- Cyanide Test:

A small amount of CN⁻ test 2 solution was added to a test tube containing 1/4 inch of CN⁻ test 1 solution. Approximately 1/2 inch of the sample was added to another test tube. The CN⁻ test solution was added to the sample solution and then an acid test solution was added. A deep prussian blue color indicated the sample contained cyanide. A positive result for CN⁻ ended the test and the sample was classified as a CN⁻. A negative result for CN⁻ ended the test and then the sample was classified as caustic.

- Chlorine Hot Wire Test:

A chlorine hot wire was heated in a torch flame until there was no green flame. The wire was then allowed to cool. The wire was placed into a test tube containing the sample and reheated in a torch flame. A green flame indicated the sample contained chlorine, amine, nitrate, or ammonium salt.

- Organic Halogenated Solvent Test:

Based on the results of the combustibility test, the Setaflash test, the chlorine hot wire test and the water reactive/solubility test, an assumption was made as to whether or not the sample was an organic halogenated solvent.

Clor-N-Oil test:

The Clor-N-Oil test was used to check samples for PCBs. A precise amount of sample was placed into a tube. A colorless ampule containing a catalyst was broken and thoroughly mixed with the sample. A second ampule containing metallic sodium was broken and the sodium, activated by the catalyst, stripped chlorine from the sample forming sodium chloride. A buffer solution in water was added to the sample which neutralized the excess sodium and extracted the sodium chloride into the water. The water layer was then separated from the sample.

An ampule containing a precise amount of reagent was broken and mixed with the water. An indicator ampule was then broken and mixed. The color of the mixture depended on the amount of PCBs (chlorine) in the sample.

The Clor-N-Oil test kit works on the principle of chloride determination. Since PCBs contain chlorine, the test kit is able to detect them. However, the test cannot distinguish between any other chlorine containing compound such as trichlorobenzene which may also be in transformer oil. This may cause a result which is known as a "false positive"; i.e., the oil may indicate the presence of over 50 ppm PCBs, but when analyzed by a gas chromatography, it will show somewhat less than 50 ppm.

Quanti-Chlor •¹

In addition to and in support of a positive result with a Clor-N-Oil test, a Quanti-Chlor• test kit was used. The Quanti-Chlor test yields quantitative results in micrograms per gram ($\mu\text{g/g}$) total chlorine in waste oil. Organic chlorine is converted to chloride with naphthalene, dig-lyme, and metallic sodium. The chloride was extracted into an aqueous buffer and titrated with mercuric nitrate. Diphenylcarbazone was the endpoint indicator. Titrets•², hand-held titration cells, were used in the mercuric nitrate titration.

Spil-fyter Chemical Classifier Test Strip:

In addition to the field screening tests, a Spil-fyter chemical classifier test strip was used on each sample. The results of the Spil-fyter strips were used as a secondary test to help support the data from the HAZCAT tests. Some interferences that the Spil-fyters have are concentrated acid solutions that tend to destroy the indicators, heavy oils and opaque solutions mask the colors, and light weight organic solvents cause color bleeding. The detection limits of the Spil-fyter are:

- 1 milligram/liter (mg/L), Chlorine,
- 3 mg/L , Hydrogen Peroxide,
- 20 mg/L , Fluoride and
- 10 mg/L , Gasoline.

2.1.3 Groundwater Sampling

Four temporary monitor wells were installed using hand augers (Figure 1). The PVC screens were installed approximately 2-3 ft below the water table. Prior to sampling, each monitor well was developed by purging until clear water (< 50 Nephelometric Turbidity Units) was produced. Well development was performed in accordance with U.S. EPA/ERT/REAC SOP # 2044, Well Development. Peristaltic pumps were used to develop and sample the wells. Between 20 and 25 gallons of water were purged from each well during development. Periodically during development, pH, dissolved oxygen, temperature, and conductivity were monitored using the Omega Water Analyzer™. Turbidity was monitored using the Lamont Turbidity Meter™. The instruments were calibrated daily to ensure accurate measurements. Temperature, pH, dissolved oxygen, conductivity, and turbidity, were measured in each well (Table 1).

Depth to water measurements were taken after development of each well. Water level measurements were recorded in accordance with ERT/REAC SOP # 2043, Water Level Measurement. These measurements were used to determine groundwater elevation (Table 2) and flow direction.

¹ Quanti-Chlor • is a registered trademark of CHEMetrics, Inc.

² Titrets • is a registered trademark of CHEMetrics, Inc.

Groundwater samples were collected in accordance with ERT/REAC SOP # 2007, Groundwater Well Sampling. The groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), base, neutral, and acid extractable compounds (BNAs), pesticides/polychlorinated biphenyls (PEST/PCBs), and Target Analyte List (TAL) metals. Both filtered and unfiltered samples were analyzed for TAL metals.

2.1.4 Surface Water Sampling

Two surface water samples were collected from the excavation pits in accordance with ERT/REAC SOP # 2013, Surface Water Sampling. The surface water samples were analyzed for TCL VOAs, BNAs, PEST/PCBs, and TAL metals.

2.1.5 Sediment Sampling

Three sediment samples were collected from the excavation pits using hand augers. The sediment samples were collected in accordance with ERT/REAC SOP # 2016, Sediment Sampling. These samples were analyzed for TCL VOCs, BNAs, PEST/PCBs and TAL metals. In addition, these samples were analyzed for Toxic Characteristic Leaching Procedure (TCLP) for the same parameters.

2.1.6 Geophysical Survey

A survey was performed to detect and delineate geophysically anomalous areas indicative of buried drums within a 12-acre portion of the site. Variations of the earth's local magnetic field intensity occur in the vicinity of ferromagnetic objects. It is common practice to measure this field, alone or in combination with its vertical gradient, to locate buried ferromagnetic objects (such as steel drums). Empirical studies have shown that an individual 55-gallon steel drum can be detected when buried in relatively nonmagnetic material to depths of up to 10 feet.

Electromagnetic instruments can be used to detect anomalous conductivity enhancements such as those due to buried metallic objects (such as steel drums). Scattering of the quadrature-phase component of the induced electromagnetic field is used to determine the bulk electrical conductivity, or terrain conductivity, of the shallow subsurface. Enhancements of the inphase component of the scattered electromagnetic field result from the presence of relatively good conductors, such as buried metallic objects.

Geophysical methods used in this investigation included electromagnetics and magnetics. A GEM[®] Systems model GSM-19 magnetometer/gradiometer was used to obtain the earth's total magnetic field intensity and vertical magnetic field gradient at geophysical grid stations. In addition, a Geonics[®] EM-31 terrain conductivity instrument was used to obtain terrain conductivity and inphase readings at these same locations. A brief description of these methods follows.

A geophysical grid was established using a compass and a measuring tape, consisting of traverses spaced 20 feet apart, upon which stations were located at 5-foot intervals. The geophysical grid is shown on data plots in which station locations are posted with a "+" symbol (Figure 3). Line orientations were magnetic north-south, and wooden stakes were used to indicate the locations of the 0 North grid position on each line.

Data obtained each day were downloaded into a portable computer where profiles were viewed for preliminary data inspection and interpretation. Hard copy plots of specific traverses were produced to aid in interpretation. A preliminary interpretation was available the following morning.

Electromagnetics (EM-31): The electromagnetic method (EM) is a geophysical technique based on the physical principle of inducing and detecting electrical current flow within the earth, including any conductors contained (buried) therein. The EM-31 is a fixed-coil (approximately 10-foot separation) electromagnetic instrument that generates an electromagnetic field at a known frequency. The primary coil transmits the electromagnetic field and the receiving coil measures the change in electric and magnetic components (secondary electromagnetic field) of the field after propagation through the earth. The EM-31 measures two quantities: the inphase and quadrature phase components of the secondary electromagnetic field. The inphase measurement is more sensitive to good conductors (metallic objects) than the quadrature phase component. The quadrature phase measurement is commonly used to measure directly the bulk conductivity (or its inverse, resistivity) of lithologic materials. For this reason, the inphase component was closely reviewed for anomalies indicative of buried drums. Also, the quadrature phase component was useful for delineating changes in the conductivity due to excavation and subsequent burial.

Prior to use of the EM-31, the instrument was calibrated according to the manufacturer's recommendations. A data logger was used to record both inphase and quadrature phase measurements as well as all pertinent site features (e.g., metallic debris, power lines, buildings, etc.) to ensure quality data and assist in anomaly delineation.

The EM data was obtained at 5-foot intervals along traverses spaced 10 to 40 feet apart, depending upon specific site characteristics. A series of these traverses formed a data collection grid. The end points of each traverse were marked for subsequent anomaly location using stakes, flagging, or spray paint.

Anomalous responses resulting from metallic objects located on the surface were plotted in profile and contour form. Profile plots were used for interpretation on a per line basis, and contour plots were used to visualize spacial variations in instrument response over a large area.

Magnetics: The objective of the magnetic survey was to map magnetic field anomalies and thereby locate their ferromagnetic sources, in this case steel drums. The lines and sample nodes were spaced in the identical locations as those of the EM transects. Both magnetic and magnetic gradient data were electronically recorded.

The magnetic method involves precisely measuring the earth's magnetic field. A magnetometer is used to measure variations in this field over an area of interest. Local variations, or anomalies, in the earth's magnetic field are caused most often by nearby concentrations of ferromagnetic material. In this specific instance, a metallic cylinder, cement pad, steel fences and gates, as well as other surficial metallic debris, were the cause of the detected anomalies. The magnetometer used was the GEM® Systems, GSM-19B Overhauser Effect Gradiometer.

A magnetic base station was established in an area of low magnetic gradient (approximately ± 5 nanoTesla/meter) and measurements were periodically taken at this location during the magnetic survey to monitor the diurnal variation of the earth's magnetic field. As above, all pertinent site features (e.g., metallic debris, metal trailer, metal tank, steel gate, cement pad, steel fence, etc.) were recorded in a field notebook to ensure quality data and assist in anomaly delineation. All magnetic and gradient data were electronically recorded in the GSM-19B control console/data logger.

Total field magnetic data normally include the effects of diurnal variations of the earth's magnetic field. The diurnal variations were closely monitored by repeated observation of the total magnetic field every half hour.

2.1.7 Topographical Surveying

A topographic survey was conducted using a TopconTM electronic total station. The total station uses infrared light to calculate distances and angles between points. The survey was used to determine the relative locations and elevations of the geophysical grid, sampling locations, and other site features such as buildings, fences, and roads. This data was used to produce the geophysical data and the maps included in this report and, when combined with the water level measurements from the wells, to determine the direction of groundwater flow.

3.0 RESULTS

3.1 Sampling Activities

3.1.1 Chemical Categorization Screening

Drum contents were categorized using several field screening methods (Table 3). Based on the results of the screening, samples were composited into three solid samples and three liquid samples. The solid samples were analyzed for TCL/TAL and TCLP analytes. The liquid composites were analyzed for disposal characteristics and TCL analytes (Table 4).

Appendix A contains the field notes and Appendix B contains the results of additional field screening methods.

3.1.2 Drum Samples

The results of the analysis of the three liquid composites indicate high levels of VOCs, especially acetone and styrene (Table 5). No BNAs were detected in any of these liquid samples. All three drum samples contained elevated levels of sodium, potassium, manganese, magnesium, and cobalt. The results of the disposal characterization analyses indicate that samples REAC #2 and REAC #9 have high BTU levels and low percent moisture whereas sample REAC #4 has a low BTU and high percent moisture (Table 6). Percent ash, chloride, and sulfur were relatively low and consistent in all three samples. REAC #2 and REAC #4 were overpacked due to poor condition.

The results of the TCLP analysis for the drum solids also indicate that high concentrations of VOCs are present. In addition, two BNAs (benzylalcohol and benzoic acid) and two metals (sodium and calcium) were detected. Concentration levels of PEST/PCBs were very low level or non-detect (Table 7).

3.1.3 Groundwater Samples

Elevated concentrations of metals and VOCs were detected in groundwater samples. However, no concentrations were detected above the Maximum Concentration Limit (MCL) for those analytes with an established MCL. All samples are below federal and Florida state MCLs. There was very little difference in the concentration levels of the filtered and unfiltered samples analyzed for metals. This indicates that a majority of the metals in the groundwater are dissolved. PEST/PCBs were not detected in groundwater samples (Table 8).

3.1.4 Surface Water Sampling

PEST/PCBs were not detected in any surface water sample. In addition, one BNA (di-n-butylphthalate) and one VOC (acetone) were at low concentrations. The metals analyses results indicate that the majority of the metals in the surface water samples are dissolved in the water because there was little difference between the filtered and unfiltered sample concentrations (Table 9). Sodium, magnesium, calcium, and aluminum were detected at elevated levels. No sample concentrations were detected above MCLs.

3.1.5 Sediment Samples

Phthalates were the only BNAs detected in the sediment samples. However, these compounds were also detected in the blank. Metals and low levels of VOCs were also detected in sediments (Table 10).

The results of the TCLP analyses also indicate phthalates and benzylalcohol were detected. Of the BNAs detected, di-n-butylphthalate, butylbenzylphthalate, and bis(2-ethylhexyl)phthalate were also detected in the blank. Some metals were detected in low concentrations. No PEST/PCBs or VOCs were detected in any of the samples (Table 11).

3.2 Geophysical Survey

3.2.1 Geophysical Results

Contour plots of magnetic field gradient, total magnetic field, EM-31 inphase, and EM-31 terrain conductivity are depicted in Figures 4 through 7, respectively. Note that some contours and contour line extensions were plotted where no data points are located, and are therefore inappropriate for interpretation. All contour lines drawn greater than 20-feet from a data location (the "+" symbols) are considered interpolations.

Electromagnetic site features, observed surficial metallic objects (such as a trailer), a metal tank, debris pile consisting of rubber tires and sheet metal, and observed drums are evident in the EM-31 inphase contour plot (Figure 6). All major metallic-type anomalies can be accounted for by surficial metal. A partially buried drum was observed within a shallow pit on Line 60E, Station 150N, which is the location of all of the excavated drums.

A metal automobile gas tank was noted on Line 100W, Station 125N and is apparent in the data as the peak in the EM-31 inphase (see Appendix C). The peak in the EM-31 inphase data, as shown in EM Line 60E, Station 150N (Appendix C) corresponds to the interpreted cache of drums. The magnetic gradient field corresponding to Line 60E, Station 150N indicates a low peak anomaly. The pattern depicting the surface debris pile on line 60E, Station 50N (Appendix C) indicates a high peak for the EM-31 inphase component and a low trough for the magnetic gradient component.

The diurnal variations may be neglected after careful observations of the total magnetic field at the base station and comparison with a strong anomaly of about 47500nT due to drums exposed in the pit on Line 60E, Station 150N (Figure 5). Therefore, the diurnal variation amplitude is relatively insignificant, indicating that diurnal corrections to these data are not necessary for the purposes of identifying large metallic responses.

3.3 Groundwater Elevation and Flow

The depth to water measurements were recorded after the development of each well. Based on the elevations of the groundwater, the flow direction was determined (Figure 8). Groundwater flow appears to be flowing in an easterly direction.

4.0 Conclusions

Sixteen drums were sampled to determine disposal characteristics. Based on the results of the field tests, the drum samples were composited into three liquid and three solid samples. Results of the analyses indicate elevated levels of volatile organics and metals.

Surface water, groundwater, and sediment samples were also collected. No analyte exceeded established MCLs for the groundwater and surface water samples. Low levels of VOCs, metals, and BNAs were detected in sediment samples.

Based on the results of a geophysical survey, all anomalies can be accounted for based on surface metal (known as drums and structures). No other anomalies were noted which would indicate additional buried drums.

Tables

TABLE 1
FINAL GROUNDWATER FIELD PARAMETERS
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

Well ID	Date Installed	Date developed and Sampled	Parameters			
			pH	Temperature (C)	Dissolved Oxygen (ppm)	Turbidity (NTU)
MW-N	1/11/95	1/11/95	4.58	18.7	2.3	37.1
MW-S	1/11/95	1/11/95	4.68	19.1	2.2	7.8
MW-E	1/11/95	1/11/95	4.97	18.8	3.3	48.9
MW-W	1/11/95	1/11/95	4.52	17.8	0.7	12

NTU = Nephelometric Turbidity Units
 μ S = micro Siemens (10 - 6 Siemens)

TABLE 2
GROUNDWATER ELEVATION DATA
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

LOCATION	SURFACE ELEVATION (ft)	DEPTH TO WATER (ft)	GROUNDWATER ELEVATION (ft)
MW-N	99.71	1.88	97.83
MW-S	100.45	2.58	97.87
MW-E	99.63	1.91	97.72
MW-W	100.75	2.81	97.94

All elevations are relative to the site.

TABLE 3

CHEMICAL CATEGORIZATION SCREENING

PIER DRUM SITE
BRADENTON, FLORIDA
10 JANUARY 1995

ANALAB Sample Number	REAC Sample Number	Florida DEP Number	Drum Type	Liquid	Solid	Flash	pH	H ₂ O Solubility	Reactivity	Specific Gravity	Chlor-Oil- Test	Quantl- Chlor-Test	Spill- FYTER
601	REAC#1	01	17E		X	FLASH	5	P	N-C	N/A	N	N/A	N/A
602	REAC#2	02	17E	X		NO-FLASH	7	P	N-C	S&F	+	840-2400 ppm	4.5.6
603	REAC#3	03	17E		X	NO-FLASH	7	N	N-C	S	N/A	N/A	N/A
604	REAC#4	04	17E	X		NO-FLASH	7	T	N-C	N/A	N/A	N/A	N/A
605	REAC#5	05	17E		X	NO-FLASH	N/A	N	N-C	F	N/A	N/A	N/A
606	REAC#6	06	17E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
607	REAC#7	07	17E		X	NO-FLASH	7	N	N-C	N/A	N/A	N/A	N/A
608	REAC#8	08	17E		X	NO-FLASH	7	P	N-C	S	N/A	N/A	N/A
609	REAC#9	09	17E	X		NO-FLASH	7	T	Cloudy White	N/A	N/A	N/A	N/A
610	REAC#10	10	17E		X	NO-FLASH	7	N	N-C	S	N/A	N/A	N/A
611	REAC#11	11	17E		X	FLASH	7	N	N-C	S	N/A	N/A	N/A
612	REAC#12	12	17E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
613	REAC#13	13	17E		X	NO-FLASH	7	N	N-C	N/A	N/A	N/A	N/A
614	REAC#14	14	17E		X	NO-FLASH	7	N	N-C	F	N/A	N/A	N/A
615	REAC#15	15	17E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
616	REAC#16	16	17E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TTP = Department of Environmental Protection

N/A = Non Applicable

N-C = No Change

S = Sinks, F = Floats

4 = Organic Solvent, Petroleum, Distillate Risk; 5 = Iodine, Bromine, Chlorine Risk

T = Total Solubility; P = Partial Solubility; N = No Solubility

NOTE: Drums #6, #15, #16 could not be opened, and drum #12 was determined to have the same contents as drum #10.

TABLE 4
DRUM SAMPLE COMPOSITE SCHEME
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY, 1995

Composing Scheme			
Composite ID	Original Sample ID	Sample Phase	Analysis
00912	REAC #9*	liquid	Disposal & TCL/TAL
00913	REAC #2	liquid	Disposal & TCL/TAL
00914	REAC #4	liquid	Disposal & TCL/TAL
00911	REAC #1,8,9*,11	solid	TCL (TCLP)
00915	REAC #5	solid	TCL (TCLP)
00916	REAC #3,7,10,13,14	solid	TCL (TCLP)

* Drum #9 had both a liquid and a solid layer

Disposal Parameters include: % moisture, % sulfur, % chloride, BTU, Ash content

TCL – refers to the Target Compound List for VOC, BNA, and Pest/PCB

TAL – refers to the Target Analyte List for metals

TABLE 5
SUMMARY OF RESULTS FOR DRUM LIQUID COMPOSITE SAMPLES
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

SAMPLE ID	00912		00913		00914	
SAMPLE LOCATION	REAC#9		REAC#2		REAC#4	
PARAMETER	Conc μg/L	MDL μg/L	Conc μg/L	MDL μg/L	Conc μg/L	MDL μg/L

METALS

Aluminum	690	100	ND	100	25000	100
Arsenic	ND	10	ND	10	22	10
Barium	29	10	23	10	240	10
Cadmium	7.0	4.0	34	4.0	ND	4.0
Calcium	410*	0.20*	400*	0.20*	37*	0.20*
Chromium	80	10	120	10	47	10
Cobalt	7300	10	40000	10	900	10
Copper	520	10	150	10	660	10
Iron	18*	0.05*	360*	0.05*	310*	0.05*
Lead	61	10	1200	10	38	10
Magnesium	8000	1000	8000	1000	10000	1000
Manganese	3000	4.0	5700	4.0	1500	4.0
Nickel	66	20	850	20	30	20
Potassium	12000	4000	35000	4000	12000	4000
Sodium	21000	1000	71000	1000	29000	1000
Vanadium	ND	10	ND	10	32	10
Zinc	1900	10	3600	10	330	10

PEST/PCB's

a-BHC	0.16	0.11	ND	0.11	ND	0.11
Aldrin	ND	0.11	0.18	0.11	ND	0.11

VOC's

Acetone	130000*	10*	230000*	10*	14000*	20*
2-Butanone	ND	20000	ND	20000	89000	4000
Benzene	11000	5000	12000	5000	ND	1000
Toluene	5400	5000	4100J	5000	9600	1000
Ethylbenzene	21000	5000	88000	5000	37000	1000
p&m Xylene	16000	5000	51000	5000	ND	1000
o-Xylene	8400	5000	ND	5000	800J	1000
Styrene	1200000	5000	16000000	5000	26000	1000
Isopropylbenzene	6500	5000	21000	5000	ND	1000
n-Propylbenzene	7600	5000	17000	5000	ND	1000
1,2,4-Trimethylbenzene	17000	5000	23000	5000	45000	1000
Naphthalene	3400J	5000	ND	5000	7200	1000

MDL = Method Detection Limit

ND = Not Detected

* = Concentration and MDL reported in milligram per liter (mg/L)

NOTE: Mercury analysis was not performed due to insufficient sample size.

TABLE 6
RESULTS OF ANALYSIS FOR DISPOSAL
CHARACTERISTICS ON DRUM LIQUIDS
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

Parameter	Composite ID		
	REAC # 9 ID # 00912	REAC # 2 ID # 00913	REAC # 4 ID # 00914
Heat Value (BTU/lb)	3379	5470	+50
Percent Ash Content	0.2	0.26	+0.1
Percent Chloride	0.33	0.34	0.44
Percent Sulfur	+0.1	+0.10	0.10
Percent Moisture Content	53.0	9.4	89.6

2 1 3037

TABLE 7
SUMMARY OF TCLP ANALYSES RESULTS FOR DRUM SOLIDS
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

SAMPLE NUMBER	00911		00915		00916	
SAMPLE LOCATION	REAC# 1,8,9,11		REAC#5		REAC#3,7,10,13,14	
PARAMETER	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L

BNA's						
Benzyl Alcohol	1000	20	83	20	150	20
Benzoic Acid	120	20	270	20	4800E	20
Di-n-butyl phthalate	40	20	34	20	9J	20
phenol	110	20	17J	20	34	20
2-Methylphenol	860	20	ND	20	ND	20

METALS						
Cadmium	167	80	ND	4	ND	4
Calcium	435000	2500	2800	250	1290	250
Cobalt	470	250	ND	250	ND	250
Copper	ND	50	ND	50	50	50
Iron	2190	200	ND	200	760	200
Lead	102	20	7.9	5	6.1	5
Magnesium	4300	500	300	50	170	50
Manganese	350	100	ND	100	ND	100
Potassium	4200	1000	1580	100	570	100
Sodium	3100000	500000	2300000	500000	1800000	500000
Zinc	440	50	210	50	130	50

PEST/PCB's						
BHC - delta	0.6	0.18	ND	0.11	ND	0.25
Endosulfan - alpha	ND	0.18	ND	0.11	1.0	0.25

VOC's						
Acetone	1300000D	5000	11000J	5000	ND	2500
Styrene	6100	5000	130000	2000	40000	2500

MDL = Method Detection Limit

ND = Not Detected

E = Exceeds calibration range, estimated value

J = Detected Below Detection Limit

2 2 3098

TABLE 8
SUMMARY OF GROUNDWATER WELL SAMPLE RESULTS
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

SAMPLE NUMBER		00636		00641		00635		00634		00637	
SAMPLE LOCATION		MW-S-DUP		MW-N		MW-S		MW-W		MW-E	
	MCL	CONC	MDL	CONC	MDL	CONC	MDL	CONC	MDL	CONC	MDL
PARAMETER	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L

BNA's

Di-n-butylphthalate	NEL	1J,B	10.0	50B	11.0	2J,B	10.0	66B	11.0	1J,B	11.0
---------------------	-----	------	------	-----	------	------	------	-----	------	------	------

METALS (UNFILTERED)

Aluminum	NEL	1200	40.0	16000	40	1400	40	7400	40	10000	40
Arsenic	50	3.5	2.2	12.0	2.2	3.0	2.2	10.0	2.2	19.0	2.2
Barium	2000	18	4.0	44.0	4.0	18.0	4.0	30.0	4.0	39.0	4.0
Calcium	NEL	4000	100	2300	100	4100	100	27000	100	5800	100
Chromium	100	ND	2.8	16.0	2.8	ND	2.8	7.6	2.8	13.0	2.8
Iron	NEL	9400	10	4100	10	9200	10	6600	10	4500	10
Lead	15	ND	2.2	3.0	2.2	ND	2.2	ND	2.2	3.2	2.2
Magnesium	NEL	4200	500	1400	500	4300	500	13000	500	5800	500
Manganese	NEL	4	2.0	5.0	2.0	3.0	2.0	6.0	2.0	8.0	2.0
Potassium	NEL	ND	2000	ND	2000	ND	2000	2100	2000	ND	2000
Sodium	*160000	29000	500	3800	500	30000	500	75000	500	40000	500
Vanadium	NEL	ND	5.0	25.0	5.0	ND	5.0	12.0	5.0	11.0	5.0
Zinc	NEL	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0

METALS (FILTERED)

Aluminum	NEL	1000	40	3400	40	1100	40	3500	40	4100	40
Arsenic	50	3.3	2.2	10.0	2.2	2.8	2.2	10.0	2.2	15.0	2.2
Barium	2000	17	4	4.0	4.0	17.0	4.0	10.0	4.0	9.0	4.0
Calcium	NEL	4000	100	1700	100	4100	100	28000	100	6000	100
Chromium	100	ND	2.8	ND	2.8	ND	2.8	3.8	2.8	3.5	2.8
Iron	NEL	9100	10	1700	10	9200	10	5800	10	3600	10
Lead	15	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Magnesium	NEL	4100	500	870	500	4200	500	13000	500	5600	500
Manganese	NEL	3	2.0	ND	2.0	3.0	2.0	3.0	2.0	5.0	2.0
Potassium	NEL	ND	2000	ND	2000	ND	2000	ND	2000	ND	2000
Sodium	*160000	29000	500	3000	500	30000	500	76000	500	40000	500
Vanadium	NEL	ND	5.0	9.0	5.0	ND	5.0	7.0	5.0	ND	5.0
Zinc	NEL	ND	5.0	ND	5.0	ND	5.0	5.0	5.0	ND	5.0

PEST/PCB's

NA	No Analytes Were Detected.
----	----------------------------

VOC's

Acetone	NEL	6.2	2.0	3.4	2.0	7.5	2.0	3.7	2.0	8.0	2.0
Methyl-tertiary-butylether	NEL	ND	1.0	14.0	1.0	ND	1.0	ND	1.0	ND	1.0
Toluene	1000	ND	1.0	ND	1.0	ND	1.0	ND	1.0	2.2	1.0

MCL = Maximum Contaminant Level

NOTE: All established MCLs reported indicate Florida State and Federal Regulations.

NEL = No Established MCL

*Florida State Department of Protection MCL

MDL = Method Detection Limit

ND = Not Detected

B = Compound found in blank

J = Detected below detection limit

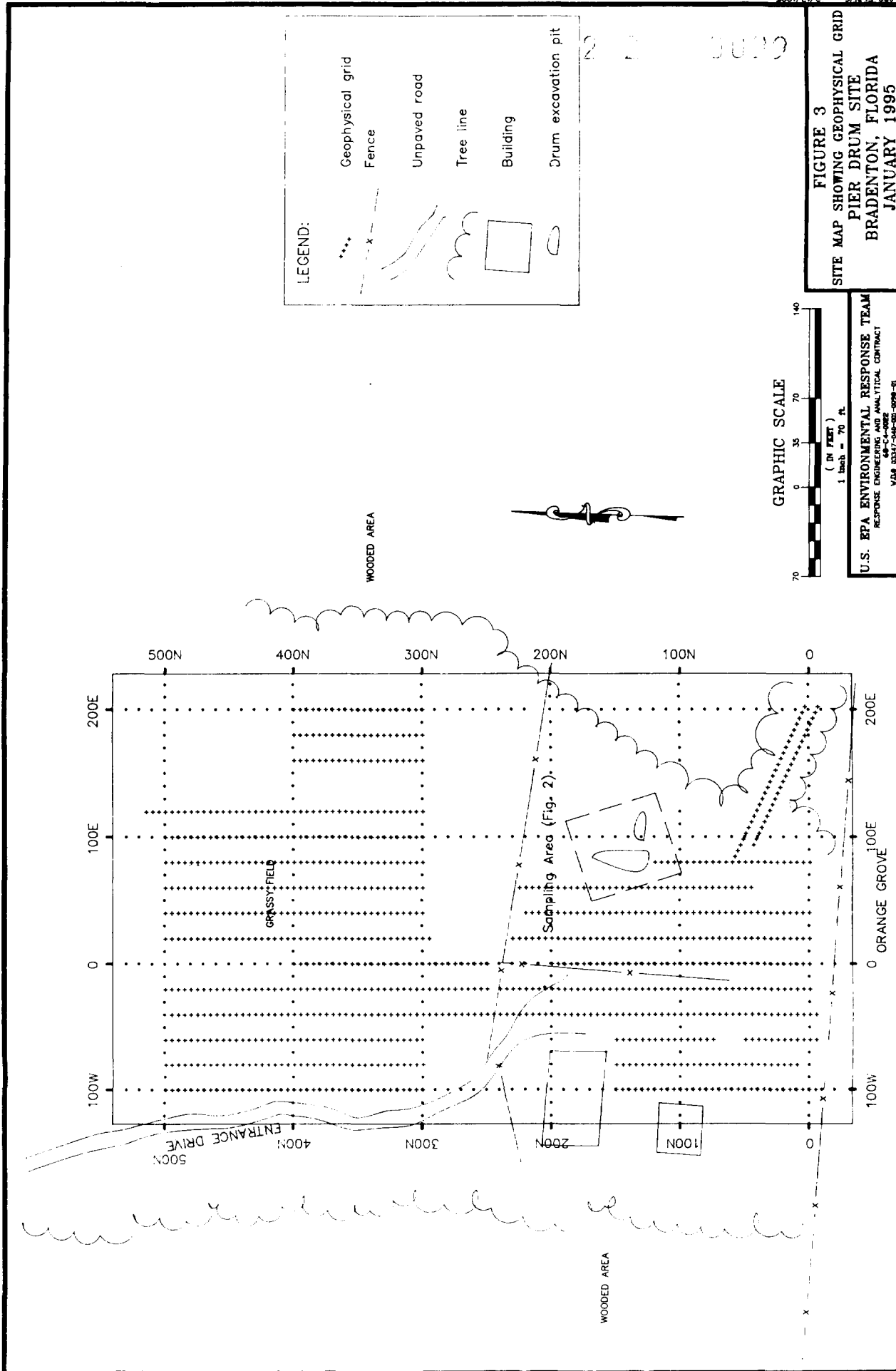


FIGURE 3
SITE MAP SHOWING GEOPHYSICAL GRID
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
44-CR-002
V/8 8837-042-01-002-01

TABLE 9
SUMMARY OF SURFACE WATER SAMPLE RESULTS
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

SAMPLE NUMBER		00639		00638	
SAMPLE LOCATION		W-PIT		N-PIT	
PARAMETER	MCL	CONC	MDL	CONC	MDL
	µg/L	µg/L	µg/L	µg/L	µg/L

BNA's

Di-n-butylphthalate	NEL	47B	10	38B	11
---------------------	-----	-----	----	-----	----

METALS (UNFILTERED)

Aluminum	NEL	2000	40	2300	40
Arsenic	50	10.0	2.2	30	2.2
Barium	2000	9.0	4.0	20	4
Calcium	NEL	12000	100	17000	100
Chromium	100	3.6	2.8	8.6	2.8
Iron	NEL	1600	10	950	10
Lead	15	ND	2.2	ND	2.2
Magnesium	NEL	4600	500	6500	500
Manganese	NEL	26.0	2.0	18	2.0
Potassium	NEL	2300	2000	4900	2000
Sodium	*160000	30000	500	25000	500
Vanadium	NEL	8.0	5.0	7	5
Zinc	NEL	56.0	5.0	27	5

METALS (FILTERED)

Aluminum	NEL	1400	40	870	40
Arsenic	50	9.6	2.2	29	2.2
Barium	2000	7.0	4.0	10	4
Calcium	NEL	9800	100	16000	100
Chromium	100	2.9	2.8	4.5	2.8
Iron	NEL	1100	10	560	10
Lead	15	ND	2.2	ND	2.2
Magnesium	NEL	3600	500	5800	500
Manganese	NEL	21.0	2.0	13	2
Potassium	NEL	ND	2000	4400	2000
Sodium	*160000	23000	500	23000	500
Vanadium	NEL	6.0	5.0	ND	5.0
Zinc	NEL	45.0	5.0	25	5.0

PEST/PCB's

NA	No Analytes Were Detected.
----	----------------------------

VOC's

Acetone	NEL	7.3	2.0	ND	2
---------	-----	-----	-----	----	---

MCL = Maximum Contaminant Level

NOTE: All MCL reported are for Florida State and Federal Regulations unless otherwise noted.

NEL = No Established MCL

*Florida State Department of Protection MC

MDL = Method Detection Limit

ND = Not Detected

B = Compound found in blank

J = Detected below detectic limit

TABLE 10
SUMMARY OF RESULTS FOR SEDIMENT SAMPLES
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

2 2 0101

SAMPLE NUMBER	A00642		A00643		A00644	
SAMPLE LOCATION	SED-S		SED-N		SED-E	
PARAMETER	CONC μg/Kg	MDL μg/Kg	CONC μg/Kg	MDL μg/Kg	CONC μg/Kg	MDL μg/Kg

BNA's

Benzyl Alcohol	ND	407	ND	398	ND	402
Diethylphthalate	87J	407	ND	398	ND	402
Di-n-butylphthalate	2765B	407	3029B	398	1581B	402
Butylbenzylphthalate	179J,B	407	156J,B	398	ND	402
Bis(2-Ethylhexyl)phthalate	338J,B	407	ND	398	39J,B	402

METALS

Aluminum	660000	9400	470000	8900	330000	9300
Barium	4700	3800	3600	3600	ND	3700
Calcium	290000	47000	94000	45000	61000	47000
Chromium	1400	800	ND	700	ND	700
Iron	200000	8400	150000	8000	4300	8400
Sodium	69000	47000	63000	45000	93000	47000
Zinc	5400	1900	ND	1800	3400	1900

PEST/PCB's

No Analytes Were Detected

VOC's

Acetone	207	2.5	ND	2.5	ND	2.5
Methyl-tertiary-butylether	ND	1.3	ND	1.2	ND	1.3
Toluene	12	1.3	0.9J	1.2	ND	1.3
Ethylbenzene	670	1.3	ND	1.2	ND	1.3
o-Xylene	2.4	1.3	ND	1.2	ND	1.3
Styrene	2.8	1.3	ND	1.2	ND	1.3
Isopropylbenzene	2.1	1.3	ND	1.2	ND	1.3
n-Propylbenzene	1.6	1.3	ND	1.2	ND	1.3
1,2,4-Trimethylbenzene	3.3	1.3	ND	1.2	ND	1.3

MDL = Method Detection Limit

ND = Not Detected

J = Compound Detected Below Method Detection Limit

TABLE 11
SUMMARY OF TCLP ANALYSES RESULTS IN SEDIMENT SAMPLES
PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

SAMPLE NUMBER	A00525		A00526		A, D00527	
SAMPLE LOCATION	SED-S		SED-N		SED-E	
	Conc	MDL	Conc	MDL	Conc	MDL
PARAMETER	$\mu\text{g/L}$	$\mu\text{g/L}$	$\mu\text{g/L}$	$\mu\text{g/L}$	$\mu\text{g/L}$	$\mu\text{g/L}$

BNA's

Benzyl Alcohol	16	13	17	11	15J	16
Diethylphthalate	5J	13	2J	11	ND	16
Di-n-butylphthalate	56B	13	45B	11	91B	16
Butylbenzylphthalate	ND	13	4J,B	11	2J,B	16
Bis(2-Ethylhexyl)phthalate	12J,B	13	11B	11	15J,B	16

METALS

Arsenic	6.3	2.2	ND	2.2	ND	2.2
Barium	930	4.0	28	4.0	11	4.0
Chromium	8.0	5.0	ND	5.0	ND	5.0
Lead	3.2	2.2	ND	2.2	ND	2.2

PEST/PCB's	No Analytes Were Detected.
-------------------	----------------------------

VOA's	No Analytes Were Detected.
--------------	----------------------------

MDL = Method Detection Limit

ND = Not Detected

J = Detected Below Detection Limit

B = Detected in Blank Sample

Figures

5661-VF 9-714-860

FIGURE 1
SITE MAP

PIER DRUM SITE
BRADENTON, FLORIDA
JANUARY 1995

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
904-537-4221-022-099-01

GRAPHIC SCALE



LEGEND:

- Fence
- Unpaved road
- Tree line
- Building
- Drum excavation pit



UNSCANNABLE

MEDIA

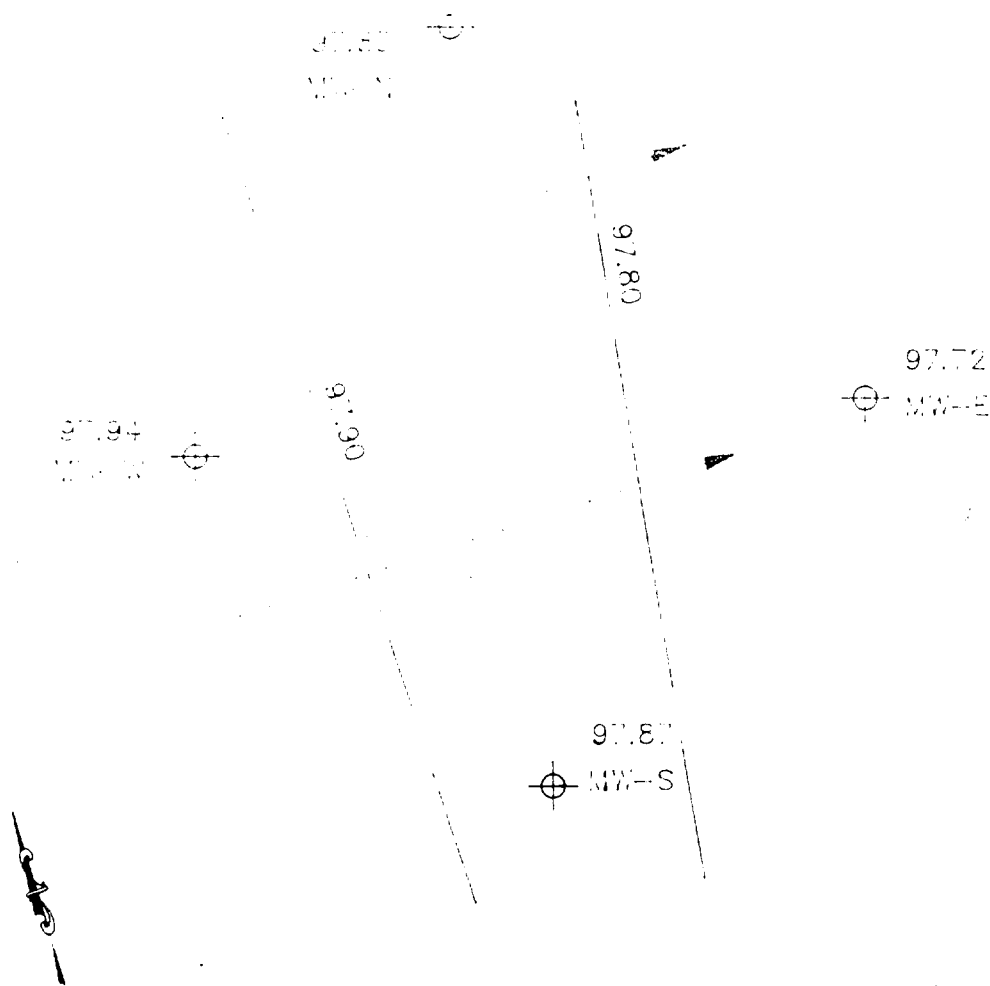
(PHOTOGRAPHS)

Number of related documents (5)

Note:




Groundwater table based on water level measurements from 1 temporary monitoring wells.

2 0 0110



Groundwater gradient is approximately .003 ft/ft

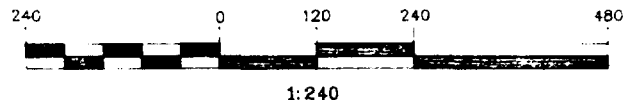
Legend:

-  Contour line
-  Groundwater direction
-  Temporary monitoring well

All distances in feet

Elevations are relative to the site

GRAPHIC SCALE



U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL SERVICES
68-04-0022
W.D.# 03347-040-001-0098-01

Figure 8
Groundwater Elevation
and Flow Direction
Pier Drum Site
Bradenton, Florida
January 1995

Appendix A

APPENDIX A

SAMPLE DOCUMENTATION

Pier Drum Site

Bradenton, FL

January 1995

Appendix Contents:

Field Notes

Field Data Sheets

Chain of Custody Communication

FIELD DATA SHEET

00634

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 114

Date 1/11/95 Samplers R. Lewis / M. Mengata Chain of Custody No. _____
Site Name Pier Drum REAC Task Leader R. Lewis
Time 1455 Sample Location MW-W EPA WAM Greg Powell
Work Assignment No. 0098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
<u>groundwater</u>	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS
A halogenated & aromatic volatiles
B volatiles
C trihalomethanes
D pesticides/PCB
E PCB
F base neutral/acid extractables
G pesticides drinking water
H herbicides drinking water
I other _____

INORGANICS

A metals priority pollutant
B metals TAL
C metals scan (ICP)
D metals other _____

RCRA

A TCLP
B ignitability
C corrosivity _____ pH _____
D reactivity
E other _____

OTHER ANALYSES
A total cyanide
B total phenol
C petroleum hydrocarbons
D pH
E alkalinity
F hardness
G total dissolved solids
H total suspended solids
I sulfate
J TOC
K grain size
L percent moisture
M other _____

SAMPLE PREPARATION

CONTAINER
glass jar
plastic jar
acetate core
plastic bag
plastic bucket
other _____
PRESERVATIVES
HNO₃
NaOH
Zn Acetate
HCl
Na₂SO₄
other _____

STORAGE

wet ice
dry ice
ambient

COMMENTS

A - Metals
G, H, I - VOA'S
E - Metals (F)
C - BNA
D - BNA
E - Pest/PCB
F - Pest/PCB

FIELD DATA SHEET

00635

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 11 15

Date 1/11/95 Samplers: M. S. R. Lewis / S. Getty Chain of Custody No.: _____
Time 1455 Site Name: Pier Drum REAC Task Leader: R. Lewis
Sample Location: MW - 5 EPA WAM: G. Powell
Work Assignment No.: 0098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	width	rock	silt		
industrial	wooded	lowland riverine	gravel	muck	odor	depth	rubble	clay		
commercial	farmland	lacustrine	sand	loam	flow	velocity	cm/s	gravel	organic	
residential	gully		silt	peat	direction	pools	%	shell	other	
hedgerows	floodplain		color			riffles	%	sand		

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
<u>groundwater</u>	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A halogenated & aromatic volatiles
- B volatiles
- C trihalomethanes
- D pesticides/PCB
- E PCB
- F base neutral/acid extractables
- G pesticides, drinking water
- H herbicides, drinking water
- I other

INORGANICS

- A metals, priority pollutant
- B metals, TAL
- C metals scan (ICP)
- D metals, other

RCRA

- A TCLP
- B ignitability
- C corrosivity pH
- D reactivity
- E other

OTHER ANALYSES

- A total cyanide
- B total phenol
- C petroleum hydrocarbons
- D pH
- E alkalinity
- F hardness
- G total dissolved solids
- H total suspended solids
- I sulfate
- J TOC
- K grain size
- L percent moisture
- M other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

STORAGE

- wet ice
- dry ice
- ambient

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

COMMENTS

A - H₂O₂
B - H₂O₂ / F₂
C - BNA
D - ENA
E - Fe₂/Fe
F - Fe₂/PCB
G - H₂O₂ - 100%

FIELD DATA SHEET

00636

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0116

Date 1/11/95 Samplers: A. Lewis Chain of Custody No.: _____
 Time 15:04 Site Name: Port Drum REAC Task Leader: K. Lewis
 Sample Location MW-DUP EPA WAM: Powell
 Work Assignment No.: 0098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

ORGANICS

- A halogenated & aromatic volatiles
 3 volatiles
 C trihalomethanes
 D pesticides/PCB
 E PCB
 F base neutral/acid extractables
 G pesticides, drinking water
 H herbicides, drinking water
 I other _____

INORGANICS

- A metals, priority pollutant
 B metals TAL
 C metals scan (ICP)
 D metals, other _____

RCRA

- A TCLP
 B ignitability
 C corrosivity _____ pH _____
 D reactivity
 E other _____

OTHER ANALYSES

- A total cyanide
 B total phenol
 C petroleum hydrocarbons
 D pH
 E alkalinity
 F hardness
 G total dissolved solids
 H total suspended solids
 I sulfate
 J TOC
 K grain size
 L percent moisture
 M other _____

SAMPLE PREPARATION

CONTAINER

- glass jar
 plastic jar
 acetate core
 plastic bag
 plastic bucket
 other _____

STORAGE

- wet ice
 dry ice
 ambient

PRESERVATIVES

- HNO₃
 NaOH
 Zn Acetate
 HCl
 Na₂SO₄
 other _____

COMMENTS

A - metals
 E - metals (F)
 G, H - BNA
 E, F - Pos/606
 G, H - VOA's

FIELD DATA SHEET

00637

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 1 117

Date: 1/12/95 Samplers: R. Lewis Chain of Custody No.: _____
Site Name: Pier 8 REAC Task Leader: R. Lewis
Time: 8:57 Sample Location: MWE EPA WAM: R. Lewis
Work Assignment No.: 098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	width	rock	silt		
industrial	wooded	lowland riverine	gravel	muck	odor	depth	rubble	clay		
commercial	farmland	lacustrine	sand	loam	flow	velocity	cm/s	gravel	organic	
residential	gully		silt	peat	direction	pools	%	shell	other	
hedgerows	floodplain		color			riffles	%	sand		

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

A - Metals
B - Metals
C - BNA
E - Rest/PCB
G - I - Volatiles

FORM #1

FIELD DATA SHEET

00638

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 1113

Date 1/12/95 Samplers R. Lewis Chain of Custody No.: _____
Site Name: Pier Drum REAC Task Leader: R. Lewis
Time _____ Sample Location NPIT EPA WAM: Powell
Work Assignment No.: 0078

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other _____

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other _____

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other _____

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other _____

STORAGE

- wet ice
- dry ice
- ambient

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other _____

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity _____ pH _____
- D. reactivity
- E. other _____

COMMENTS

A - Metals
B - Metals/F
C, D - BNA
E, F - PCB/pest
G, H, I - UOAC

FORM #1

FIELD DATA SHEET

00639

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Chain of Custody No.:

REAC Task Leader:

EPA WAM:

Work Assignment No.:

Date: 4/11/95 Samplers: R. Lewis
Site Name: Pier Drum
Time: _____ Sample Location: WEST PIT (WPIT)

Chain of Custody No.: _____
REAC Task Leader: Ray Lewis
EPA WAM: Gregg Powell
Work Assignment No.: 098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

ORGANICS

- A halogenated & aromatic volatiles
 B volatiles
 C trihalomethanes
 D pesticides/PCB
 E PCB
 F base neutral/acid extractables
 G pesticides, drinking water
 H herbicides, drinking water
 I other _____

INORGANICS

- A metals, priority pollutant
 B metals, TAL
 C metals scan (ICP)
 D metals, other _____

OTHER ANALYSES

- A total cyanide
 B total phenol
 C petroleum hydrocarbons
 D pH
 E alkalinity
 F hardness
 G total dissolved solids
 H total suspended solids
 I sulfate
 J TOC
 K grain size
 L percent moisture
 M other _____

SAMPLE PREPARATION

CONTAINER

- glass jar
 plastic jar
 acetate core
 plastic bag
 plastic bucket
 other _____

STORAGE

- wet ice
 dry ice
 ambient

PRESERVATIVES

- HNO₃
 NaOH
 Zn Acetate
 HCl
 Na₂SO₄
 other _____

RCRA

- A TCLP
 B ignitability
 C corrosivity _____ pH _____
 D reactivity
 E other _____

COMMENTS

AL - Metals
 CD - ENH
 FF - Rest / HLE

FORM #1

SAF - John

FIELD DATA SHEET

00640

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Date: 1/11/95 Samplers: Ray Lewis Chain of Custody No.: _____
Site Name: Pier Drum REAC Task Leader: Ray Lewis
Time: _____ Sample Location: Field Blank EPA WAM: Gregg Arnold
Work Assignment No.: 998

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other _____

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other _____

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other _____

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other _____

STORAGE

- wet ice
- dry ice
- ambient

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other _____

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity _____ pH _____
- D. reactivity
- E. other _____

COMMENTS:

AB - Metals
CD - BUA
EF - Pest/PCB
GH - Volatiles

FIELD DATA SHEET

00641

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 1121

Chain of Custody No.: _____

REAC Task Leader: Ray LewisEPA WAM: Greg RayneWork Assignment No.: 098

Date: 1/11/95 Samplers: Ray Lewis
Site Name: Pier Drump
Time: _____ Sample Location: MCU-N

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
J. volatiles
C. trihalomethanes
D. pesticides/PCB
E. PCB
F. base neutral/acid extractables
G. pesticides, drinking water
H. herbicides, drinking water
I. other _____

INORGANICS

- A. metals, priority pollutant
B. metals, TAL
C. metals scan (ICP)
D. metals, other _____

OTHER ANALYSES

- A. total cyanide
B. total phenol
C. petroleum hydrocarbons
D. pH
E. alkalinity
F. hardness
G. total dissolved solids
H. total suspended solids
I. sulfate
J. TOC
K. grain size
L. percent moisture
M. other _____

CONTAINER

- glass jar
plastic jar
acetate core
plastic bag
plastic bucket
other _____

PRESERVATIVES

- HNO₃
NaOH
Zn Acetate
HCl
Na₂SO₄
other _____

STORAGE

- wet ice
dry ice
ambient

RCRA

- A. TCLP
B. ignitability
C. corrosivity _____ pH _____
D. reactivity
E. other _____

COMMENTS

FR - 1/11/95
CD - ENH
EP - 1/11/95
3-1 - 1/11

FIELD DATA SHEET

00642

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

1122

Chain of Custody No.:
REAC Task Leader: Ray Lewis
EPA WAM: Gregg Russell
Work Assignment No.: 098

Date: 1/11/95 Samplers: R Lewis
Site Name: Pier Ocean
Time: Sample Location: SEDS

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

A - all TCL & all TCLP except VOA's
C - VOA's
E - VOA's (TCLP)
CDE - VOA's

FIELD DATA SHEET

00643

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 0 1123

Date: 1/11/75 Samplers: _____ Chain of Custody No.: _____
Site Name: Pier Draym REAC Task Leader: Ray Lewis
Time: _____ Sample Location: SED N EPA WAM: Greg Powell
Work Assignment No.: 098

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

STORAGE

- wet ice
- dry ice
- ambient

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

COMMENTS

A - all TCL & TCLP except VOA's
B - VOA's TCLP
CDE - VOA's

FIELD DATA SHEET

00644

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 3124

Date: 1/11/95 Samplers: Ray Lewis Chain of Custody No.: _____
Site Name: Pier Drum REAC Task Leader: Ray Lewis
Time: _____ Sample Location: SED-E EPA WAM: Gregg Powell
Work Assignment No.: 090

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
3. volatiles
C. trihalomethanes
D. pesticides/PCB
E. PCB
F. base neutral/acid extractables
G. pesticides, drinking water
H. herbicides, drinking water
I. other _____

OTHER ANALYSES

- A. total cyanide
B. total phenol
C. petroleum hydrocarbons
D. pH
E. alkalinity
F. hardness
G. total dissolved solids
H. total suspended solids
I. sulfate
J. TOC
K. grain size
L. percent moisture
M. other _____

CONTAINER

- glass jar
plastic jar
acetate core
plastic bag
plastic bucket
other _____

PRESERVATIVES

- HNO₃
NaOH
Zn Acetate
HCl
Na₂SO₄
other _____

STORAGE

- wet ice
dry ice
ambient

INORGANICS

- A. metals, priority pollutant
B. metals, TAL
C. metals scan (ICP)
D. metals, other _____

RCRA

- A. TCLP
B. ignitability
C. corrosivity _____ pH
D. reactivity
E. other _____

COMMENTS

A. all TCLP, TCEP except VOGS

B. VOGS TCEP

C, D, E - VOGS

FIELD DATA SHEET

00645

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0125

Chain of Custody No.: _____
 REAC Task Leader: Ray Lewis
 EPA WAM: Gregg Powell
 Work Assignment No.: 028
 Date: _____ Site Name: Pier Drum
 Time: _____ Sample Location: Trip Bank
 Samplers: Ray Lewis

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color	_____	width	_____	rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor	_____	depth	_____	rubble	clay
commercial	farmland	lacustrine	sand	loam	flow	_____	velocity	_____ cm/s	gravel	organic
residential	gully		silt	peat	direction	_____	pools	_____ %	shell	other
hedgerows	floodplain		color	_____			riffles	_____ %	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	_____	pH	_____
groundwater	sludge	trowel	other	odor	_____	ORP	_____
potable water	leachate	bucket		temp	_____	salinity	_____
sediment	waste	auger		DO	_____	sample depth	_____
soil	other	ekman		cond	_____	tide stage	_____

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

COMMENTS

VOAS

0098 Drum Sample
10 Jan 95

REAC #1

17E

Pots 11

01 FLADEP #

The Dm is on its side & is very
Damaged.

The Bung is moist & may be leaking
microtip at Bung 126 ppm
SOLID - Brown 3/4 Full

DRUM/TANK SAMPLING DATA SHEET

2 1 27

Samplers: Getty & Morganti

Site Name: Pier Drum

Container Number/Sample Number: REAC#1

Date: 10 Jan 95

Work Assignment Number: 3347-04-01-0098

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H 0 in
Approximate size: 55 gal in 85 gal in
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge rocks
6. Color: Brown, Odor: Yes, Vapors: Yes in

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

Flash X IGNITABILITY 0 No Flash _____

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 5 pH of the H₂O used in Solubility Test

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, X partial, _____ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: _____ Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, X No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results: N/A

COMMENTS

① When the Solid was placed in the Flash tester & heated for 1 min it did Flash + for better Probe, Tube

FIELD DATA SHEET

00601

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 1 5128

Chain of Custody No.:

3627

REAC Task Leader:

Ray Lewis

EPA WAM:

Greg Powell

Work Assignment No.:

3347 40010098-01

Samplers: Getty & Marguerite
Date: 10 Jan 95 Site Name: Pier Drum
Time: 1300 Sample Location: Sarasota FLA

SITE DESCRIPTION

landfill old field upland palustrine
industrial wooded lowland riverine
commercial farmland lacustrine
residential gully
hedgerows floodplain

SOIL TYPE

rock clay
gravel muck
sand loam
silt peat
color

SURFACE WATER

color
odor
flow
direction

STREAM

width
depth
velocity cm/s
pools %
riffles %

BOTTOM

rock silt
rubble clay
gravel organic
shell other
sand

SAMPLE TYPE

surface water effluent
groundwater sludge
potable water leachate
sediment waste
soil other

DEVICE

kemmerer ponar
trowel other
bucket
auger
ekman

SAMPLE INFORMATION

color
odor
temp
DO
cond

WEATHER PARAMETERS

pH
ORP
salinity
sample depth
tide stage
ambient temp
barometric pressure
relative humidity
weather conditions

ANALYSES TO BE PERFORMED

ORGANICS

A. halogenated & aromatic volatiles
B. volatiles
C. trihalomethanes
D. pesticides/PCB
E. PCB
F. base neutral/acid extractables
G. pesticides, drinking water
H. herbicides, drinking water
I. other

INORGANICS

A. metals, priority pollutant
B. metals, TAL
C. metals scan (ICP)
D. metals, other

OTHER ANALYSES

A. total cyanide
B. total phenol
C. petroleum hydrocarbons
D. pH
E. alkalinity
F. hardness
G. total dissolved solids
H. total suspended solids
I. sulfate
J. TOC
K. grain size
L. percent moisture
M. other

CONTAINER

glass jar
plastic jar
acetate core
plastic bag
plastic bucket
other

PRESERVATIVES

HNO₃
NaOH
Zn Acetate
HCl
Na₂SO₄
other

STORAGE

wet ice
dry ice
ambient

RCRA

A. TCLP
B. ignitability
C. corrosivity pH
D. reactivity
E. other

COMMENTS

Drum Sample REAC #1
FLA DEP #1
17E

REAC # 2

17E

Pots 12 + 13 - 14

Q2 FLADEP #

Dm to in Air shape

Markings

DION

Polyester Resin

Koppers Company, Inc

Organic Material Group

Pittsburg, Pa. # 15219

Also contains a Warning Label Pot # 14

Static Contents of Styrene Monomer

250 PPM Microtip Full

LIQUID → 50%

Solid/sludge → 50%

REDISH Brown Liquid

Multi colored sludge

DRUM/TANK SAMPLING DATA SHEET

2 1 0130

Samplers: Getty & Morganti

Date: 10 Jan 95

Site Name: Pier Drum

Work Assignment Number: 3347-04-01-0098

Container Number/Sample Number: REAC#2

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H in
Approximate size: 55 gal in 85 gal in
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: X liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, X partial, _____ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water): 1

1. Add small amount of sample to water: X Sinks, X Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION: - Test done 2 times.

1. Test kit used for this sample: X Yes, _____ No
2. Results: _____ PCB not present; X PCB present, less than 50 ppm;
X PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results: Positive for Petroleum Product, Organic Solvent & Chlorine Risk

Quantity

Over →

COMMENTS

- 1) Liquid separates after 5 min is dissolved w/ H₂O. Part Floats & Part Sinks.
- 2) Hot Wire test produced Burns on skin
- 3) Chlorine wire test produce a ... flame.
- 4) Product appears to be ...
... exposed to Air.

FIELD DATA SHEET

00602

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Chain of Custody No.: 3627
REAC Task Leader: Roy Lewis
EPA WAM: Greg Powell
Work Assignment No.: 3347400000001

Date: 10 Jan 95 Samplers: Getty Morimoto
Site Name: Pier Drum
Time: 1300 Sample Location: Sarasota FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Drum Sample REAC # 2
FLA DEP #1
17E

REAC*3
03 FLADCP# Bto 15
17E

Dr is Dental and is cut open
on the side by bung

7/8 Full solid plastic like
very hard to sample
Amber in color



DRUM/TANK SAMPLING DATA SHEET

2 1 33

Samplers: Getty & Morganti

Site Name: Pier Drum

Container Number/Sample Number: REAC#3

Date: 10 Jan 95

Work Assignment Number: 3347-04-01-0098

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H ~~17H~~
Approximate size: 55 gal in 85 gal ~~85 gal~~
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: pink → clear, Odor: Yes, Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, _____ partial, X no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: X Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: X Yes, _____ No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

+ A. Signer Dr. T. Tub.

FIELD DATA SHEET

00603

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Chain of Custody No.: 3627

REAC Task Leader: Ray Lewis

EPA WAM: Greg Powell

Work Assignment No.: 33474001009804

Date: 10-Jun-95
Time: 1300
Site Name: Pier Drums
Sample Location: Sarasota FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- halogenated & aromatic volatiles
- B volatiles
- C trihalomethanes
- D pesticides/PCB
- E PCB
- F base neutral/acid extractables
- G pesticides, drinking water
- H herbicides, drinking water
- I other

INORGANICS

- A metals, priority pollutant
- B metals, TAL
- C metals scan (ICP)
- D metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A TCLP
- B ignitability
- C corrosivity pH
- D reactivity
- E other

COMMENTS

Drum Sample RETC #3
FLA DEP #3
17E

REAC #4

Q4 FLADEP #

Pots 16

Surge 17H

DM is not secured.

Drum in over pack

~~2/8 Full solid plastic like CP~~

~~very hard to sample CP~~

~~Amber to color CP~~

LIQUID with some resin

2ppm 1/4 full

CLEAR Liquid

DRUM/TANK SAMPLING DATA SHEET

2 2 1136

Samplers: Getty & Morganti
Site Name: Pier Drum
Container Number/Sample Number: REAC#4

Date: 10 Jan 95
Work Assignment Number: 3347-04-01-0098
REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions: in
5. Description: X liquid, X ~~solid~~ powder or X ~~crystals~~, sludge
6. Color: Brown, Odor: Yes No, Vapors: Yes in

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: X total, _____ partial, _____ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: X Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, X No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

Seems to be a bit Soapy.

FIELD DATA SHEET

00604

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 1 17

Chain of Custody No.: 3627
REAC Task Leader: Ray Lewis
EPA WAM: Grey Powell
Work Assignment No.: 3494004009-01

Date: 10 Jan 95 Site Name: Pier Drum
Time: 1300 Sample Location: Servicos FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Drum Sample REAC # 4
FLA DEP # 4
Solvent Drum 17HJ

REAC #5

Q5 FLADEP #

Pto 17

Sludge 17H

400ppm microtip

FULL

CLEAR GELATINACIOUS^(S) sludge
IN OVER PACK

DRUM/TANK SAMPLING DATA SHEET

Samplers: Getty & Morganti

Site Name: Pier Drum

Container Number/Sample Number: REAC#5

Date: 10 Jan 95

Work Assignment Number: 3347-04-01-0098

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H in overpak 17H
Approximate size: 55 gal in 85 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: X liquid, X solid (powder or X crystals), sludge
6. Color: Clear/Pink, Odor: Yes, Vapors: Yes in

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: N/A

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, _____ partial, X no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: _____ Sinks, X Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, X No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

Seems to be an adhesion
+ for \$ Tentative Drop-Tube

FIELD DATA SHEET

00605

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0140

Date: 10 Jan 96 Samplers: Getty, Monzumbi Chain of Custody No.: 3627
Time: 1300 Site Name: Pier Drums REAC Task Leader: Ray Lewis
Sample Location: Sarasota FLA EPA WAM: Greg Powell
Work Assignment No.: 3547 4001000841

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

COMMENTS

Drum Sample Retic #5

FLA DEP # 5

Sarasota Dam 17 ft

REAC #6

Q6 FLADP #

17E

Dm is in fair shape

multicolored solid

Contents appear to have polymerized

NO - SAMPLE

REAC # 7

Rusty Blue + white drum

7/8 full solid multicolored

RESIN

Very hard to sample.

DRUM/TANK SAMPLING DATA SHEET

2 2 3143

Samplers: Getty & Morganti

Site Name: Pier Drum

Container Number/Sample Number: REAC#7

Date: 10 Jan 95

Work Assignment Number: 3347-04-01-0098

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in ~~overpak~~ 17H
Approximate size: 55 gal in ~~85 gal~~
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: ~~Yes~~

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7.1

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, _____ partial, X no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: X Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, X No
2. Results: _____ PCB not present; X PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

Product Burns

COMMENTS

FIELD DATA SHEET

00607

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0144

Chain of Custody No.: 3627

REAC Task Leader: Rylee

EPA WAM: Craig Powell

Work Assignment No.: 334704010008

Samplers: Getty, Margenti
Date: 10/15/95 Site Name: Pier Drum
Time: 1300 Sample Location: Sarsotz FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

COMMENTS

Drum Sample RETC # 7
FLA DEP # 7
17E

REAC #8

8 FLA DEP #

Photo 18

Sludge 17H

1/2 Full

3.8 ppm

Brown + white resin sludge
with sand

DRUM/TANK SAMPLING DATA SHEET

2 2 0146

Samplers: Getty & Morganti

Date: 10 Jan 95

Site Name: Pier Drum

Work Assignment Number: 3347-04-01-0098

Container Number/Sample Number: REAC#8

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: Black, Odor: Yes, Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash X

pH OF AQUEOUS SOLUTION 7

1. Using 0-14 pH paper, check pH of water/sample solution: _____

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATERREACTIVE!] Results: _____ total, X partial, _____ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: X Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, X No
2. Results: _____ PCB not present; X PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

FIELD DATA SHEET

00608

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Chain of Custody No.: 3627REAC Task Leader: Ry LewisEPA WAM: Gus PowellWork Assignment No.: 33474001009501

Samplers: Getty, Maganti
Date: 10 Jan 95 Site Name: Red Drum
Time: 1300 Sample Location: Seaside FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Drum Sample REAC #8FLA DEP #8Seaside Dm 1711/

REK #9

Q9 FLADEP# Pato 19

Sevage 17H

Drum upside down in overpack G

Liquid in butt 6P

Drum covered with sand bung
obscured.

Liquid in Bottom of over-pack
1000ppm on micro tip.

DRUM 1/2 Full

1/2 - liquid - clear

1/2 - sludge/resin - gray Brown

DRUM/TANK SAMPLING DATA SHEET

2 1 0119

Samplers: Getty & Morganti
Site Name: Pier Drum
Container Number/Sample Number: REAC#9

Date: 10 Jan 95
Work Assignment Number: 3347-04-01-0098
REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions: *rocky*
5. Description: *X* liquid, *X* solid (powder or *X* crystals), sludge
6. Color: *red/clar*, *Gray*, Odor: Yes, Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash *X*

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: *7*

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: *X* total, _____ partial, _____ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, *X* color change to *Cloudy White*
_____ odor or vapor formation, _____ heat, _____ No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: *X* Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: *X* Yes, _____ No
2. Results: *X* PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results: *Chlorine Risk*

COMMENTS

+ for Acetic Drier Tube

FIELD DATA SHEET

00609

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0100

Chain of Custody No.: 3627Samplers: Getty, ManagutiREAC Task Leader: Roy LewisDate: 10/6/95 Site Name: Pier DrumEPA WAM: Greg PeruchTime: 1300 Sample Location: Sarasota FLAWork Assignment No.: 33474001/009541

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Drum Sample REAC #9
PLA DEP #9
5:00pm 17/11

REAC # 10
100 FLADEP # Photo 20
17E

Drum is dented on the side.
Writing on top of Drum
"407# MCC 22-23

Drum is full, Solid Blue &
Weight 15 lbs

Rem 13
A short of
side

DRUM/TANK SAMPLING DATA SHEET

2 2 3162

Samplers: Getty & Morganti
Site Name: Pier Drum
Container Number/Sample Number: REAC#10

Date: 10 Jan 95
Work Assignment Number: 3347-04-01-0098
REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E ~~in overpak~~ 17H
Approximate size: 55 gal ~~in 85 gal~~
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash ☒

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATERREACTIVE!] Results: _____ total, _____ partial, ☒ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, ☒ No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: ☒ Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, ☒ No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

+ for Sty... Dräg-Tube

FIELD DATA SHEET

00610

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 5 1183

Chain of Custody No.: 3627

REAC Task Leader: Ray Lewis

EPA WAM: Greg Powell

Work Assignment No.: 33474001000809

Samplers: Getty Moreyanti
Date: 10 Jan 95 Site Name: Pier Drum
Time: 1300 Sample Location: Surfside FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

STORAGE

- wet ice
- dry ice
- ambient

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

COMMENTS

Drum Sample REAC #10
FLADEP #10
17E

RETC # 11

11 FLADEP #
17E

Photo 21

Dm has same dents as the
TOP of the Red Point is peeling

Dm is full w/ solid Red &
Gray Clay.

DRUM/TANK SAMPLING DATA SHEET

2 2 11:5

Samplers: Getty & Morganti
Site Name: Pier Drum
Container Number/Sample Number: REAC#11

Date: 10 Jan 95
Work Assignment Number: 3347-04-01-0098
REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

Flash X IGNITABILITY No Flash

- pH OF AQUEOUS SOLUTION 7
1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATERREACTIVE!] Results: total, partial, X no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: bubbles, color change to ,
 odor or vapor formation, heat, X No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: X Sinks, Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLORIN OIL TEST KIT INFORMATION:

1. Test kit used for this sample: Yes No
2. Results: PCB not present; PCB present, less than 50 ppm;
 PCB present, greater than 50 ppm; 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

+ for Acetone Dräger Tube

FIELD DATA SHEET

00611

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 1156

Chain of Custody No.: 3627
 REAC Task Leader: R. Lewis
 EPA WAM: Ging Rwell
 Work Assignment No.: 3347400100480
 Date: 10 Jan 95 Site Name: Pier Drum
 Time: 1300 Sample Location: Surzube Pt
 Samplers: Getty Mergante

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Drum Sample RETC # 11

FLA DEP # 11

17E

REAC # 12

12 FLA DEP # Photo 22

17E

Dom is in bad shape.
The Top is Crushed.
And the side is split open
(Photo 23)

Did not Sample Saw as
10

RETC # 13

13 FLA DE P # Photo 23

17E

Das is in fair shape

3/4 Full w/ Solid green & weight
Onitthen

DRUM/TANK SAMPLING DATA SHEET

Samplers: Getty & Morganti
 Site Name: Pier Drum
 Container Number/Sample Number: REAC#13

Date: 10 Jan 95
 Work Assignment Number: 3347-04-01-0098
 REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
 MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
 Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash ☒

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATER REACTIVE!] Results: _____ total, _____ partial, ☒ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____,
 _____ odor or vapor formation, _____ heat, ☒ No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: ☒ Sinks, _____ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: _____ Yes, ☒ No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
 _____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

for Styrene Degrader Tube

FIELD DATA SHEET

00613

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 00

Chain of Custody No.: 3627
 REAC Task Leader: R. Lewis
 EPA WAM: G. Powell
 Work Assignment No.: 3347400/000401
 Samplers: Getty, Marc, Gault
 Date: 10/2/95 Site Name: Pier Drum
 Time: 1300 Sample Location: Surfside FLA

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

A. halogenated & aromatic volatiles
 B. volatiles
 C. trihalomethanes
 D. pesticides/PCB
 E. PCB
 F. base neutral/acid extractables
 G. pesticides, drinking water
 H. herbicides, drinking water
 I. other

INORGANICS

A. metals, priority pollutant
 B. metals, TAL
 C. metals scan (ICP)
 D. metals, other

OTHER ANALYSES

A. total cyanide
 B. total phenol
 C. petroleum hydrocarbons
 D. pH
 E. alkalinity
 F. hardness
 G. total dissolved solids
 H. total suspended solids
 I. sulfate
 J. TOC
 K. grain size
 L. percent moisture
 M. other

CONTAINER

glass jar
 plastic jar
 acetate core
 plastic bag
 plastic bucket
 other

PRESERVATIVES

HNO₃
 NaOH
 Zn Acetate
 HCl
 Na₂SO₄
 other

STORAGE

wet ice
 dry ice
 ambient

RCRA

A. TCLP
 B. ignitability
 C. corrosivity pH
 D. reactivity
 E. other

COMMENTS

Drum Sample RCTC# 13
 FLA DEP # 13
 17E

REK # 14

14 FLA DEP

Photo 24

17E

Dm 13 out of ships.

Full w/ Green & Weight
Solid Crystals.

DRUM/TANK SAMPLING DATA SHEET

2 2 0102

Samplers: Getty & Morganti

Site Name: Pier Drum

Container Number/Sample Number: REAC#14

Date: 10 Jan 95

Work Assignment Number: 3347-04-01-0098

REAC Task Leader: Ray Lewis

SITE INFORMATION:

1. Terrain, drainage description: Flat, roul woods and feilds with sandy soil.
2. Weather conditions (from observation): Mid to high 60's °F and sunny.
MET station on site: X No, Yes

SAMPLE INFORMATION:

1. Container type: X Drum, Tank, Other:
2. Container dimensions: Shape: 17E in overpak 17H
Approximate size: 55 gal in 85 gal
3. Label present: X No, Yes:
4. Spill or Leak present: X No, Yes, Dimensions:
5. Description: liquid, X solid (powder or X crystals), sludge
6. Color: , Odor: Yes , Vapors: Yes

FIELD TEST DATA SHEET FOR DRUM/TANK SAMPLING

IGNITABILITY

Flash _____

No Flash ☒

pH OF AQUEOUS SOLUTION

1. Using 0-14 pH paper, check pH of water/sample solution: 7

WATER SOLUBILITY TEST:

1. Add approximately one part sample to five parts water. You may need to stir and heat gently. [DO NOT HEAT IF WATERREACTIVE!] Results: _____ total, _____ partial, ☒ no solubility.

WATER REACTIVITY:

1. Add small amount of sample to water: _____ bubbles, _____ color change to _____, _____ odor or vapor formation, _____ heat, ☒ No Change.

SPECIFIC GRAVITY TEST (compared to water):

1. Add small amount of sample to water: _____ Sinks, ☒ Floats.
2. If liquid sample sinks, screen for chlorinated compounds. If liquid sample floats and appears to be oily, screen for PCB's (Chlor n Oil kit).

CHLOR N OIL TEST KIT INFORMATION:

1. Test kit used for this sample: ☒ Yes, _____ No
2. Results: _____ PCB not present; _____ PCB present, less than 50 ppm;
_____ PCB present, greater than 50 ppm; _____ 100 % PCB present.

SPILL-FYTER CHEMICAL CLASSIFIER STRIPS:

Results:

COMMENTS

+ for Styren Dräger Tube

FIELD DATA SHEET

00614

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 1 1163

Chain of Custody No.: 3627
REAC Task Leader: Ray Lewis
EPA WAM: Greg Powell
Work Assignment No.: 33494004000001

Date: 10/1/95 Samplers: Griffy Merganti
Site Name: Refr. Driv
Time: 1300 Sample Location: Sunset

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

COMMENTS:

Drum Sample RETC #14
FLA DEP #14
IFE

REAC #15
15 FLAREP # Photo 25
17E

Dm 13 dented on the side:

Rock Solid to the top, could not
even open.

Not
Sampled

REAC# 16

16 FLA DEP# Photo 26

Solvent 17H w/ 17E inside

NA Sampled

Rock Solid to the Top

FIELD DATA SHEET

00911

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 2166

Chain of Custody No.: 66
REAC Task Leader: Lewis
EPA WAM: Powell
Work Assignment No.: 0004-1
33174000100048

Date: 30 Jan 95 Site Name: Pier Drum
Time: 10000 Sample Location: MS 200000 FLA RTR

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

STORAGE

- wet ice
- dry ice
- ambient

RCRA

A. TCLP

B. ignitability

C. corrosivity

D. reactivity

E. other

VVA

BNA

PCB/Rest

Metals

pH

COMMENTS

Composit Sample from Drum's REAC # 1

REAC # 8

REAC # 9

REAC # 11

FIELD DATA SHEET

00914

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 2 0107

Chain of Custody No.: 66 & 65
REAC Task Leader: Lewis
EPA WAM: Powell
Work Assignment No.: 33474000098
Date: 30 Jan 95 Site Name: River Drive
Time: 1000 Sample Location: REAC
Samplers: Getty

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- base neutral/acid extractables
- G. pesticides, drinking water
- H. herbicides, drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

- RCRA
- A. TCLP
- B. ignitability
- C. corrosivity
- D. reactivity
- E. other

COMMENTS

Liquor from Sample REAC# 4

Sample was split between 2 Canset Lab REAC# 5

FIELD DATA SHEET

00915

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

2 1 198

Chain of Custody No.: 66
REAC Task Leader: Lewis
EPA WAM: Powell
Work Assignment No.: 334740010098

Samplers: Getty
Date: 30 Jan 95 Site Name: Pier Drum
Time: 1000 Sample Location: REAC

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color		pH	ambient temp
groundwater	sludge	trowel	other	odor		ORP	barometric pressure
potable water	leachate	bucket		temp		salinity	relative humidity
sediment	waste	auger		DO		sample depth	weather conditions
soil	other	ekman		cond		tide stage	

ANALYSES TO BE PERFORMED

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides drinking water
- H. herbicides drinking water
- I. other

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity
- D. reactivity
- E. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

SAMPLE PREPARATION

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

COMMENTS

Sample from Drum REAC #5

FIELD DATA SHEET

00916

REAC, EDISON, NJ
(908) 321-4200
EPA CONTRACT 68-C4-0022

Date: 30 Jan 95 Samplers: Getty Chain of Custody No.: 66
Site Name: Pier Run REAC Task Leader: Lewis
Time: 1010 Sample Location: RETC EPA WAM: Powell
Work Assignment No.: 3347400100028

SITE DESCRIPTION			SOIL TYPE		SURFACE WATER		STREAM		BOTTOM	
landfill	old field	upland palustrine	rock	clay	color		width		rock	silt
industrial	wooded	lowland riverine	gravel	muck	odor		depth		rubble	clay
commercial	farmland	lacustrine	sand	loam	flow		velocity	cm/s	gravel	organic
residential	gully		silt	peat	direction		pools	%	shell	other
hedgerows	floodplain		color				riffles	%	sand	

SAMPLE TYPE		DEVICE		SAMPLE INFORMATION		WEATHER PARAMETERS	
surface water	effluent	kemmerer	ponar	color	pH	ambient temp	
groundwater	sludge	trowel	other	odor	ORP	barometric pressure	
potable water	leachate	bucket		temp	salinity	relative humidity	
sediment	waste	auger		DO	sample depth	weather conditions	
soil	other	ekman		cond	tide stage		

ANALYSES TO BE PERFORMED

SAMPLE PREPARATION

ORGANICS

- A. halogenated & aromatic volatiles
- B. volatiles
- C. trihalomethanes
- D. pesticides/PCB
- E. PCB
- F. base neutral/acid extractables
- G. pesticides drinking water
- H. herbicides drinking water
- I. other

OTHER ANALYSES

- A. total cyanide
- B. total phenol
- C. petroleum hydrocarbons
- D. pH
- E. alkalinity
- F. hardness
- G. total dissolved solids
- H. total suspended solids
- I. sulfate
- J. TOC
- K. grain size
- L. percent moisture
- M. other

CONTAINER

- glass jar
- plastic jar
- acetate core
- plastic bag
- plastic bucket
- other

PRESERVATIVES

- HNO₃
- NaOH
- Zn Acetate
- HCl
- Na₂SO₄
- other

STORAGE

- wet ice
- dry ice
- ambient

INORGANICS

- A. metals, priority pollutant
- B. metals, TAL
- C. metals scan (ICP)
- D. metals, other

RCRA

- A. TCLP
- B. ignitability
- C. corrosivity pH
- D. reactivity
- E. other

COMMENTS

Composit Sample from Drum Samples RETC #3

RETC #7

RETC #10

RETC #13

RETC #14

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

TCLP Sample Data Sheet

			EXTRACTION FLUID DETERMINATION				TCLP EXTRACTION			
SAMPLE # AND DESCRIPTION	% WET SOLIDS	FILTRATE pH (%solid <100)	INITIAL pH (solids)	FINAL pH (solids)	EXTRACTION FLUID	FLUID VOLUME	SAMPLE MASS	START TIME	END TIME	FINAL pH
A 00642	83		6.3	1.4	#1	1L	50(61)	1520	0925	4.9
A 00643	83		6.2	1.6	#1	1L	50(61)			5.0
A 00644	83		6.3	1.3	#1	2L	100(120)			4.8
A 0042B	.				#1	1L	50(61)			4.9
43B					#1	1L	50(61)			5.0
44B					#1	2L	100(120)			4.9
42C					#1	1L	50(61)			5.0
43C					#1	1L	50(61)			5.0
44C					#1	2L	100(120)			4.9

Technician: B. Haddad
Date: 1/17/95
C-O-C #: 10027

Site Name: Pine Dam
WA #: 1-098
Task Leader: Ray Lewis
WAM:

Roy F. Weston, Inc.
REAC, Edison, N.J.
EPA Contract 68-03-

Project Name: Tues
Project Number: 15347-090-0078-01
RFW Contact: P. Hollenbeck Phone: X

No: 10027

ANALYSES REQUESTED

SAMPLE IDENTIFICATION

SHEET NO. 1 OF 1

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	100% H ₂ O ₂	100% H ₂ SO ₄	100% H ₂ PO ₄
	A00525	A00642	W	1/13/15	1	LL 1210/100	X		
	B00526	"			1	LL 1210/100		X	
	C00525	"			1	LL 1210/100			X
	A00526	A00643			1	LL 1210/100	X		
	B00526	"			1	LL 1210/100		X	
	C00526	"			1	LL 1210/100			X
	A00527	A00644			1	LL 1210/100	X		
	B00527	"			1	LL 1210/100		X	
	C00527	"			1	LL 1210/100			X

Special Instructions:

SD - Sediment	PW - Potable Water	S - Soil
DS - Drum Solids	GW - Groundwater	W - Water
DL - Drum Liquids	SW - Surface Water	O - Oil
X - Other	SL - Sludge	A - Air

Special instructions.

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF
CUSTODY #

[illegible]

CHAIN OF CUSTODY RECORD

Project Name: Pier Drive

Project Number: 33174001001801

RFW Contact: S. L. Gentry Phone: 912-347-0740

SHEET NO. 7 OF 7

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	H ₂ O, %
	G001	Dm 1	DS	10/11/05	1	R1A	
	G002	Dm 2	DL				
	G003	Dm 3	DS				
	G004	Dm 4	DL				
	G005	Dm 5	DS				
	G007	Dm 7	DS				
	G008	Dm 8	DS				
	G009	Dm 9	DL/DS				
	G010	Dm 10	DS				
	G011	Dm 11	DS				
	G013	Dm 13	DS				
	G014	Dm 14	DS				

Matrix:

Special Instructions:

Sediment
Drum Solids
Drum Liquids
Other

PW- GW- SW- SL-

Potable Water
Groundwater
Surface Water
Sludge

Soil
Water
Oil
Air

1618 f. 55. 1648.

FOR SUBCONTRACTING USE ONLY

**FROM CHAIN OF
CUSTODY #**

[illegible]**FORM 41**

10/8

EPA Contract 88-C4-0022

Pier D class

RFW Contact: R Lewis Phone: 4565

SHEET NO. OF

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Metals	BNA	Pest/PeB	Vol's
	AB00641		W	1/11/95	2	ANB/40C	X			
	CD00641				2	12		X		
	EF00641				2				X	
	GH00641				3					X
	BC00645				2					X

Special Instructions:

Matrix:

SD -	Sediment
DS -	Drum Solids
DL -	Drum Liquids
X -	Other

PW -
GW -
SW -
SL -

Potable Water
Groundwater
Surface Water
Sludges

S'W O A

Soil
Water
Oil
Air

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

[illegible]**FORM #4**

8194

CHAIN OF CUSTODY RECORD

Project Name: Raymond
Project Number: 0334704001009801
RFW Contact: R. Grew Phone: 4269

No: 03664

SHEET NO. 7 OF 7

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TCLP VOCs
	B00649		Sed	1/11/95	1	40C	1
	B00643		1	1/11/95	1	1	1
	B00642						

Special Instructions:

Matrix:

Sediment	PW -	Potable Water	S -	Soil
Drum Solids	GW -	Groundwater	W -	Water
Drum Liquids	SW -	Surface Water	O -	Oil
Other	SL -	Sludge	A -	Air

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

[illegible]

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Pier Drum
Project Number: D347040001009801
RFW Contact: R Lewis Phone: 4261

No: 03670

SHEET NO. OF

Sample Identification

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Analyses Requested	VOA's
	AB00635		W	1/11/95	2	HNO ₃ /4°C	Metals	
	ED00635				2	4°C		
	EF00635				2			
	GH00635				3			
	AB00639				2	HNO ₃ /4°C		
	ED00639				2			
	EF00639				2			
	GH00639				3			
	AD00640				2	4°C/HNO ₃		
	ED00640				2	4°C		
	EF00640				2			
	GH00640				3			

Special Instructions:

- Matrix:
- | | | |
|-------------------|--------------------|-----------|
| SD - Sediment | PW - Potable Water | S - Soil |
| DS - Drum Solids | GW - Groundwater | W - Water |
| DL - Drum Liquids | SW - Surface Water | O - Oil |
| X - Other | SL - Sludge | A - Air |

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Relinquished By	Date	Received By	Date	Time
Relinquished	R Lewis	1/11/95							

CHAIN OF CUSTODY RECORD

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

Project Name: Pier 9
Project Number: 03387 240001 VP9801
RFW Contact: R Lewis Phone: 4269

No: 03671

SHEET NO. OF 709

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Hex-As	BNA	As/Pb/Bs	VOA's
496	AB00636		W	1/1/95	2	4003/400	X			
497	000636				2			X		
498	EF00636				2				X	
499	CAI 00636				3					
500	AB00638				2		X			X
501	000638				2			X		
502	EF00638				2				X	
503	CAI 00638				3					X

Special Instructions:

Matrix: Sediment
S - Soil
NL - Drum Solids
X - Drum Liquids
Other

PW - Potable Water
GW - Groundwater
SW - Surface Water
SL - Sludge

S - Soil
W - Water
O - Oil
A - Air

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Relinquished By	Date	Received By	Date	Time
			Michael New City	1/3/95	Michael New City	1/3/95	Michael New City	1/3/95	11:00
			Michael New City	1/3/95	Michael New City	1/3/95	Michael New City	1/3/95	11:00
			Michael New City	1/3/95	Michael New City	1/3/95	Michael New City	1/3/95	11:00
			Michael New City	1/3/95	Michael New City	1/3/95	Michael New City	1/3/95	11:00

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Pier 9 Canal
Project Number: 03347040001009801
RFW Contact: R. Lewis Phone: 4267

No: 03672

SHEET NO. OF 11

Sample Identification

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Metals	Per/Prob's	BNA's	YOA's
	AB00634		W	1/11/95	2	HNO ₃ /4°C	X			
	CD00634				2	4°C		X		
	EF00634				2	4°C		X		
	GH00634				3	4°C				X
	HA00637				2	HNO ₃ /4°C	X			
	CD00637				2	4°C		X		
	EF00637				2					
	GH00637				3					
	IA00642		S		1	10°C	X	X	X	X
	JE00642		S		3	40°C				
	MA00643				1		X	X	X	X
	NE00643				3					
	OD00644				1		X	X	X	X
	PE00644				3					

Analyses Requested

Special Instructions:

For A00643 sample
A00644 > to go
A00642 to
Brian Holden

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Matrix:
SD - Sediment
LS - Drum Solids
DL - Drum Liquids
X - Other
PW - Potable Water
GW - Groundwater
SW - Surface Water
SL - Sludge
S - Soil
W - Water
O - Oil
A - Air

Items/Reason	Relinquished By	Date	Received By	Date	Relinquished By	Date	Received By	Date	Time
AB/CD/EF/GH/IA/JE/MA/NE/OD/PE	R. Lewis	1/11/95							

**REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022**

Project Name: P.O. Sullivan
Project Number: 334610000612
RFW Contact: Kyle Davis Phone: (813) 311-0800

No: 00064

SHEET NO. 1 OF 1

013095

Sample Identification

Analyses Requested

[illegible]

Special Instructions:

Index

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

FOR SUBCONTRACTING USE ONLY

**FROM CHAIN OF
CUSTODY #**

[illegible]

FORM #4

12

13

16/8

CHAIN OF CUSTODY RECORD

Project Name: _____
Project Number: _____
RFW Contact: _____

EPA Contract 68-C4-0022

Project Number: 3317100010015
RFW Contact: R. J. Lewis Phone:

Phone: 465 13147262

01308

Sample Identification

Analyses Requested

No: 00065

SHEET NO. 7 OF 7

[illegible]

Special instructions:

Matrix:

SD -	Sediment
DS -	Drum Solids
DL -	Drum Liquids
X -	Other

PW -
GW -
SW -
SL -

Potable Water
Groundwater
Surface Water
Sludges

S-W-O-A-

Soil **Water** **OH** **Air**

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

[illegible]

FORM 14

1678

2 2 0181

Appendix B

APPENDIX B

FIELD SCREENING RESULTS

Pier Drum Site

Bradenton, FL

January 1995

Appendix Contents:

Laboratory HazCat Data

DRUM INVENTORY LOG

2 1 0183

Drum Id. : 1 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: POOR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	BROWN		
2 (Middle)				
3 (Bottom)				

Manufacturer:
 Chemical :
 Generator :
 Misc. : The bung is moist and may be leaking

LABORATORY HAZCAT DATA

2 2 0124

Drum ID : 1

Layer : (Top)

Color : BROWN

Physical State: SOLID

Clarity :

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	Y	Partial
HEX/DCM SOLUBILITY	N	
pH	5	pH is of the water used in solubility test
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	N	
FLAMMABLE	Y	sample flashed after 1 min of heating
PCB	N	

DRUM INVENTORY LOG

2 2 0185

Drum Id. : 2 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: FAIR Overpack Size:
 Debris/PPE: No. of Layers: 2

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	LIQUID	BROWN	CLOUDY	50%
2 (Middle)				
3 (Bottom)	SLUDGE	BLUE	CLOUDY	50%

Manufacturer:
 Chemical :
 Generator :
 Misc. : Markings: D10N Polyester Resin

LABORATORY HAZCAT DATA

2 1 0186

Drum ID : 2

I er : (Top)

Color : BROWN

Physical State: LIQUID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	Y	Partial
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	X	
FLAMMABLE	X	Chlorine wine test produced a green flame
PCB	Y	Quanti Chlor Test yielded from 844ppm to 2400 ppm

LABORATORY HAZCAT DATA

2 2 0187

Drum ID : 2

Layer : (Bottom)

Color : BLUE

Physical State: SLUDGE

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	N	
WATER REACTIVITY	N	
RADIOACTIVITY	N	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	N	
pH	N	
OXIDIZER	N	
PEROXIDE	N	
CYANIDE	N	
SLFIDE	N	
CHLORIDE	N	
FLAMMABLE	N	
PCB	N	

DRUM INVENTORY LOG

2 1 3138

Drum Id. : 3 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: POOR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	AMBER	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Plastic like, very hard to sample

ADDITIONAL DRUM INFORMATION

Drum Class. :

Bulk Number :

Disposal Opt.:

Disposal Co. :

Manifest No. :

LABORATORY HAZCAT DATA

2 2 0189

Drum ID : 3

Location : (Top)

Color : AMBER

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	Positive for Styrene Drager Tube
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
ALFIDE	X	
CHLORIDE	X	
FLAMMABLE	X	
PCB	X	

DRUM INVENTORY LOG

2 7 3190

Drum Id. : 4 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17H Drum Size : 55-GAL
 Drum Top : BUNG % Full : 25%
 Drum Cond.: POOR Overpack Size: 55-GAL
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	LIQUID	COLORLESS	CLEAR	
2 (Middle)				
3 (Bottom)				

Manufacturer:

C. mical :

Generator :

Misc. :

LABORATORY HAZCAT DATA

2 1 1191

Drum ID : 4

L er : (Top)

Color : COLORLESS

Physical State: LIQUID

Clarity : CLEAR

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	Y	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
JLFIDE	X	
CHLORIDE	X	
FLAMMABLE	N	
PCB	X	

DRUM INVENTORY LOG

2 2 1.92

Drum Id. : 5 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17H Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: POOR Overpack Size: 85-GAL
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	GEL	COLORLESS	CLEAR	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. :

LABORATORY HAZCAT DATA

2 2 1195

Drum ID : 5

Layer : (Top)

Color : COLORLESS

Physical State: GEL

Clarity : CLEAR

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7N/A	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	X	
FLAMMABLE	N	
PCB	X	

DRUM INVENTORY LOG

200 0194

Drum Id. : 6 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: FAIR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)				
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Contents appear to have polymerized. No sample.

DRUM INVENTORY LOG

2 1 0195

Drum Id. : 7 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti

Drum Type : BLUE AND WHITE DRUM Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: POOR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	PURPLE	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Very hard to sample

LABORATORY HAZCAT DATA

2 1 0126

Drum ID : 7

Label : (Top)

Color : PURPLE

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7N/A	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	X	
FLAMMABLE	Y	Product burns
PCB	X	

DRUM INVENTORY LOG

2 1 1997

Drum Id. : 8 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17H Drum Size : 55-GAL
 Drum Top : BUNG % Full : 50%
 Drum Cond.: POOR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SLUDGE	BROWN	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Brown and white resin sludge with sand

LABORATORY HAZCAT DATA

2 1 0123

Drum ID : 8

Layer : (Top)

Color : BROWN

Physical State: SLUDGE

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	Y	Partial
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
LFIDE	X	
CHLORIDE	X	
FLAMMABLE	X	
PCB	X	

DRUM INVENTORY LOG

2 2 0199

Drum Id. : 9 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17H Drum Size : 55-GAL
 Drum Top : BUNG % Full : 50%
 Drum Cond.: POOR Overpack Size: 85-GAL
 Debris/PPE: No. of Layers: 2

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	LIQUID	COLORLESS	CLEAR	50%
2 (Middle)				
3 (Bottom)	SLUDGE	GRAY	OPAQUE	50%

Manufacturer:

Chemical :

Generator :

Misc. : Test positive for acetone Drager Tube

LABORATORY HAZCAT DATA

2 9 3800

Drum ID : 9

Layer : (Top)

Color : COLORLESS

Physical State: LIQUID

Clarity : CLEAR

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	Y	color change to cloudy
RADIOACTIVITY	X	
WATER SOLUBILITY	Y	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
LFIDE	X	
CHLORIDE	Y	chloride risk
FLAMMABLE	N	
PCB	N	

LABORATORY HAZCAT DATA

2 2 0201

Drum ID : 9

Layer : (Bottom)

Color : GRAY

Physical State: SLUDGE

Clarity : OPAQUE

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	N	
WATER REACTIVITY	N	
RADIOACTIVITY	N	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	N	
pH	N	
OXIDIZER	N	
PEROXIDE	N	
CYANIDE	N	
LFIDE	N	
CHLORIDE	N	
FLAMMABLE	N	
PCB	N	

DRUM INVENTORY LOG

2 0 0202

Drum Id. : 10 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: FAIR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	WHITE	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

C. Lmical :

Generator :

Misc. : writing on drum: 407# MCC 22-25

ADDITIONAL DRUM INFORMATION

Drum Class. :

Bulk Number :

Disposal Opt.:

Disposal Co. :

Manifest No. :

LABORATORY HAZCAT DATA

2 2 3203

Drum ID : 10

Layer : (Top)

Color : WHITE

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	X	
FLAMMABLE	N	
PCB	X	

DRUM INVENTORY LOG

2 2 1201

Drum Id. : 11 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: FAIR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	GRAY	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. :

LABORATORY HAZCAT DATA

2 2 1105

Drum ID : 11

Layer : (Top)

Color : GRAY

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
LFIDE	X	
CHLORIDE	X	
FLAMMABLE	Y	Sample "flashed" in ignitability test
PCB	X	

DRUM INVENTORY LOG

2 2 3206

Drum Id. : 12 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: POOR Overpack Size:
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID			
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Did not sample. Same as Drum #10.

LABORATORY HAZCAT DATA

21 5207

Drum ID : 12

Layer : (Top)

Color :

Physical State: SOLID

Clarity :

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	N	
WATER REACTIVITY	N	
RADIOACTIVITY	N	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	N	
pH	N	
OXIDIZER	N	
PEROXIDE	N	
CYANIDE	N	
LFIDE	N	
CHLORIDE	N	
FLAMMABLE	N	
PCB	N	

DRUM INVENTORY LOG

2 2 0203

Drum Id. : 13 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 75%
 Drum Cond.: FAIR Overpack Size: 85-GAL
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	GREEN	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Test positive for Styrene Drager Tube.

LABORATORY HAZCAT DATA

2 2 0202

Drum ID : 13

Layer : (Top)

Color : GREEN

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
LFIDE	X	
CHLORIDE	X	
FLAMMABLE	X	
PCB	X	

DRUM INVENTORY LOG

2 1 02 0

Drum Id. : 14 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: POOR Overpack Size: 85-GAL
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)	SOLID	GREEN	CLOUDY	100%
2 (Middle)				
3 (Bottom)				

Manufacturer:

C. nical :

Generator :

Misc. : Test positive for Styrene Drager Tube

LABORATORY HAZCAT DATA

2 2 3211

Drum ID : 14

Layer : (Top)

Color : GREEN

Physical State: SOLID

Clarity : CLOUDY

TEST NAME	RESULT	COMMENTS
AIR REACTIVITY	X	
WATER REACTIVITY	N	
RADIOACTIVITY	X	
WATER SOLUBILITY	N	
HEX/DCM SOLUBILITY	X	
pH	7	
OXIDIZER	X	
PEROXIDE	X	
CYANIDE	X	
SULFIDE	X	
CHLORIDE	X	
FLAMMABLE	N	
PCB	X	

DRUM INVENTORY LOG

2 1 0212

Drum Id. : 15 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size :
 Drum Top : BUNG % Full :
 Drum Cond.: FAIR Overpack Size:
 Debris/PPE: No. of Layers:

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)				
2 (Middle)				
3 (Bottom)				

Manufacturer:

C. nical :

Generator :

Misc. : Rock solid to the top. Could not even open. Not sampled.

DRUM INVENTORY LOG

2 1 0215

Drum Id. : 16 Location: pit
 Date : 01/10/95 Sampler : S.Getty\M.Morganti
 Time : Witness : S.Getty\M.Morganti
 Drum Type : STEEL-17E Drum Size : 55-GAL
 Drum Top : BUNG % Full : 100%
 Drum Cond.: FAIR Overpack Size: 85-GAL
 Debris/PPE: No. of Layers: 1

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)				
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Rock solid to the top. Not sampled.

DRUM INVENTORY LOG

2 2 0214

Drum Id. : 1,8,9,11 C Location: composite
 Date : 01/19/95 Sampler : S.Getty
 Time : Witness :
 Drum Type : Drum Size :
 Drum Top : % Full :
 Drum Cond.: Overpack Size:
 Debris/PPE: No. of Layers:

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)				
2 (Middle)				
3 (Bottom)				

Manufacturer:

C. nical :

Generator :

Misc. : Sample is a composite of 4 Drum samples (#1,8,9, and 11).

DRUM INVENTORY LOG

2 2 0215

Drum Id. : COMPOSITE2

Location:

Date : 01/19/95

Sampler : S.Getty

Time :

Witness :

Drum Type :

Drum Size :

Drum Top :

% Full :

Drum Cond.:

Overpack Size:

Debris/PPE:

No. of Layers:

LAYERS	PHYSICAL STATE	COLOR	CLARITY	LAYER DEPTH
1 (Top)				
2 (Middle)				
3 (Bottom)				

Manufacturer:

Chemical :

Generator :

Misc. : Sample is a composite of samples 3,7,10,13, and 14.

Appendix C

APPENDIX C

GEOPHYSICAL SURVEY

Pier Drum Site

Bradenton, FL

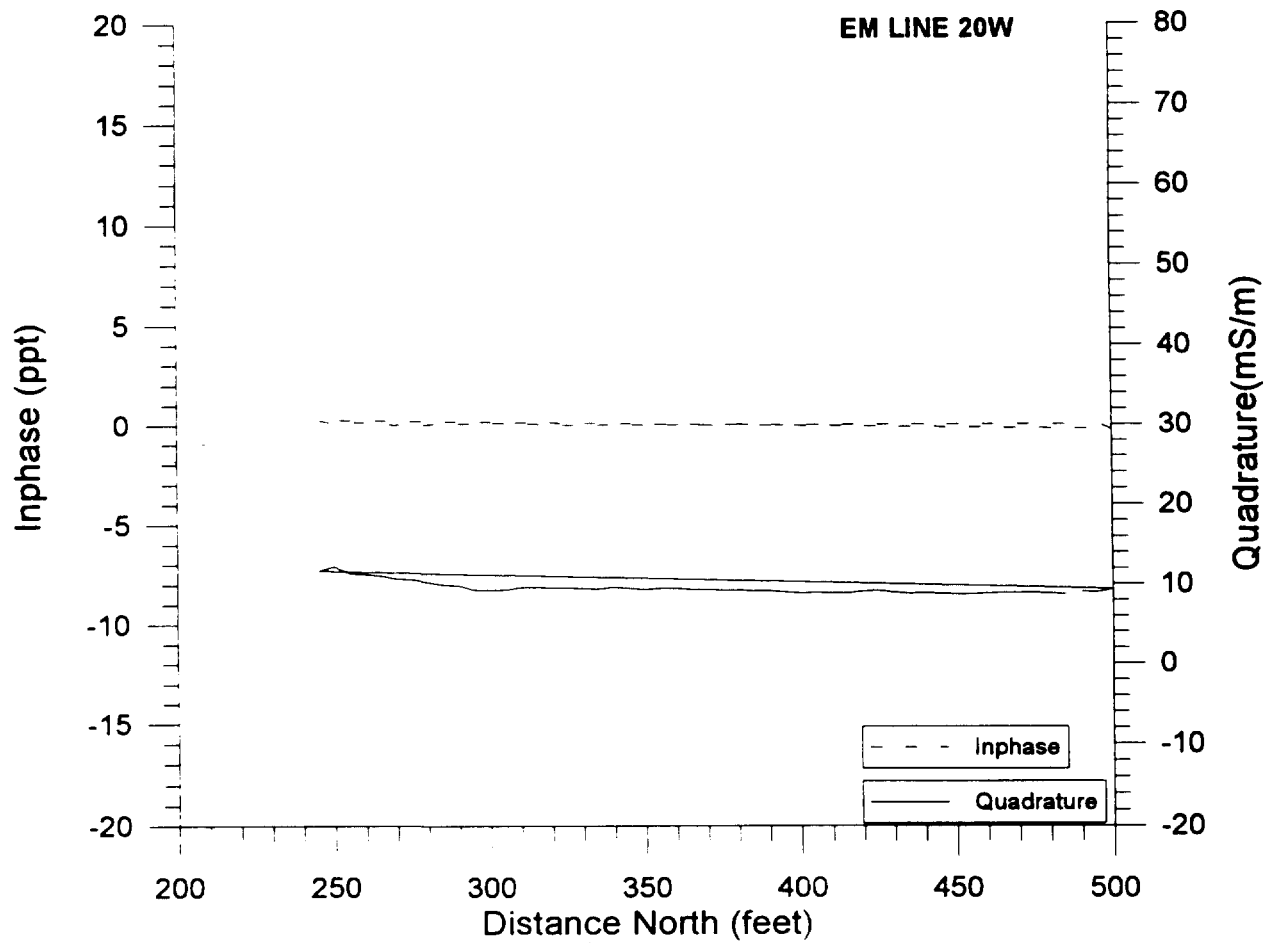
January 1995

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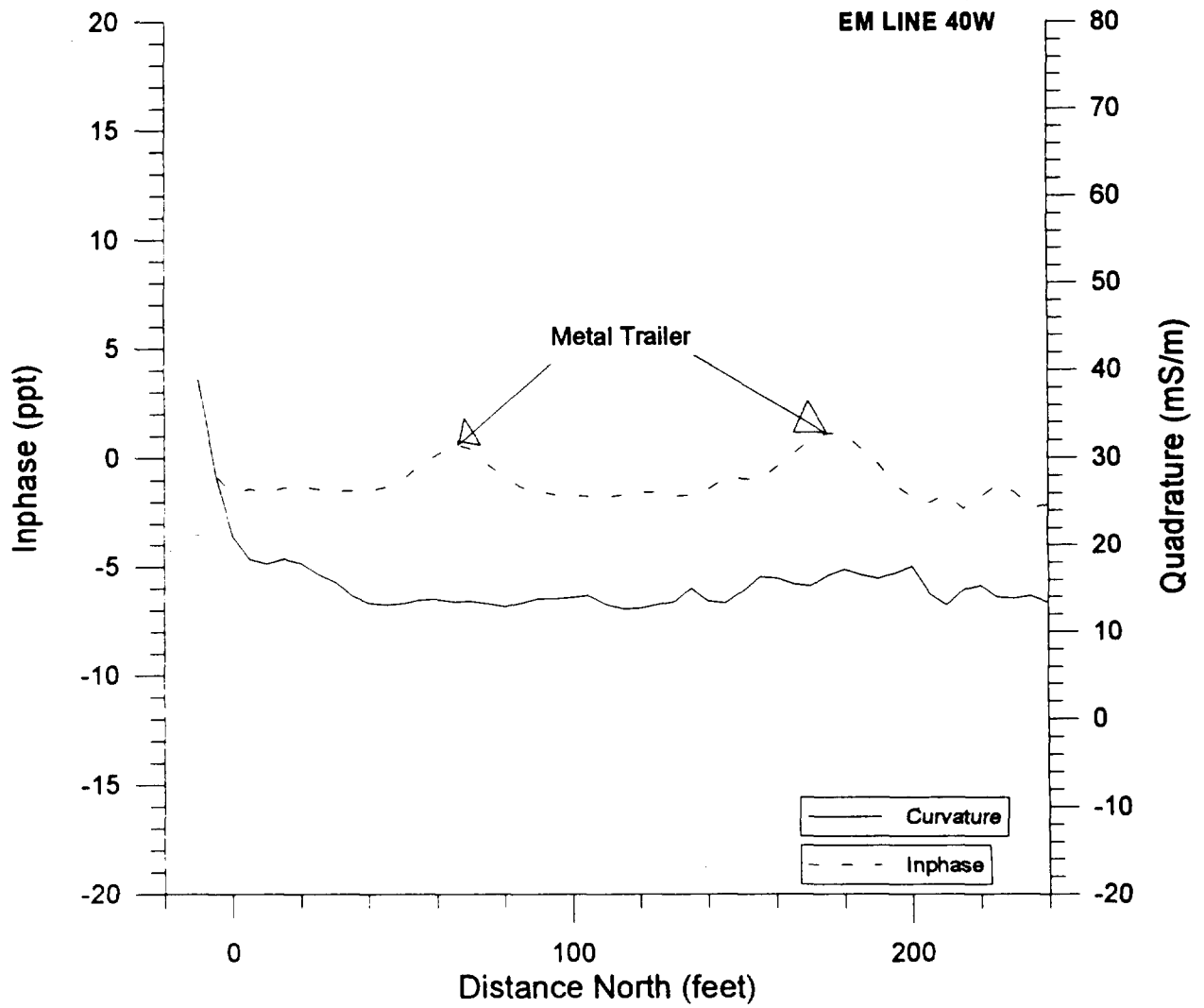
Electromagnetic (EM-31) Profiles

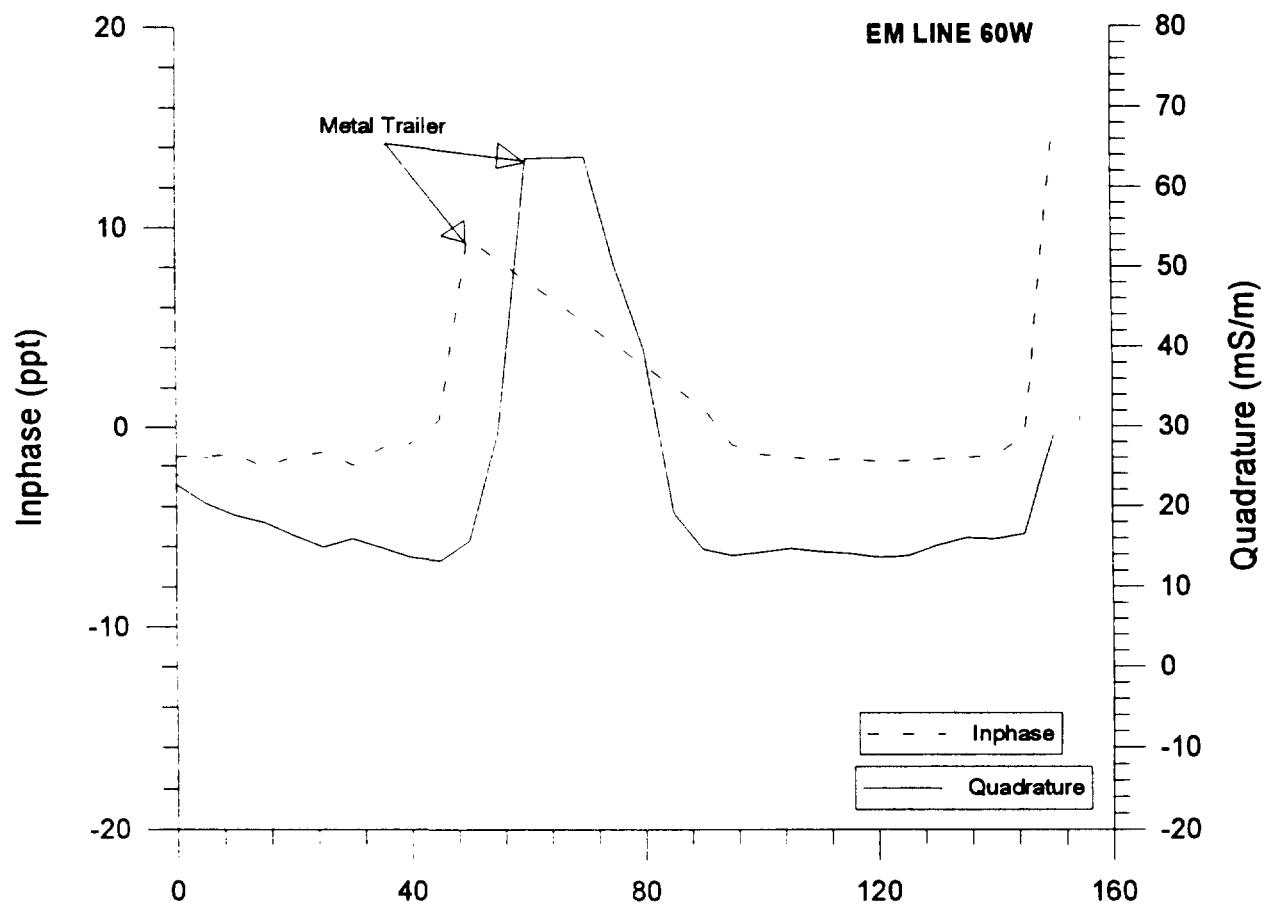
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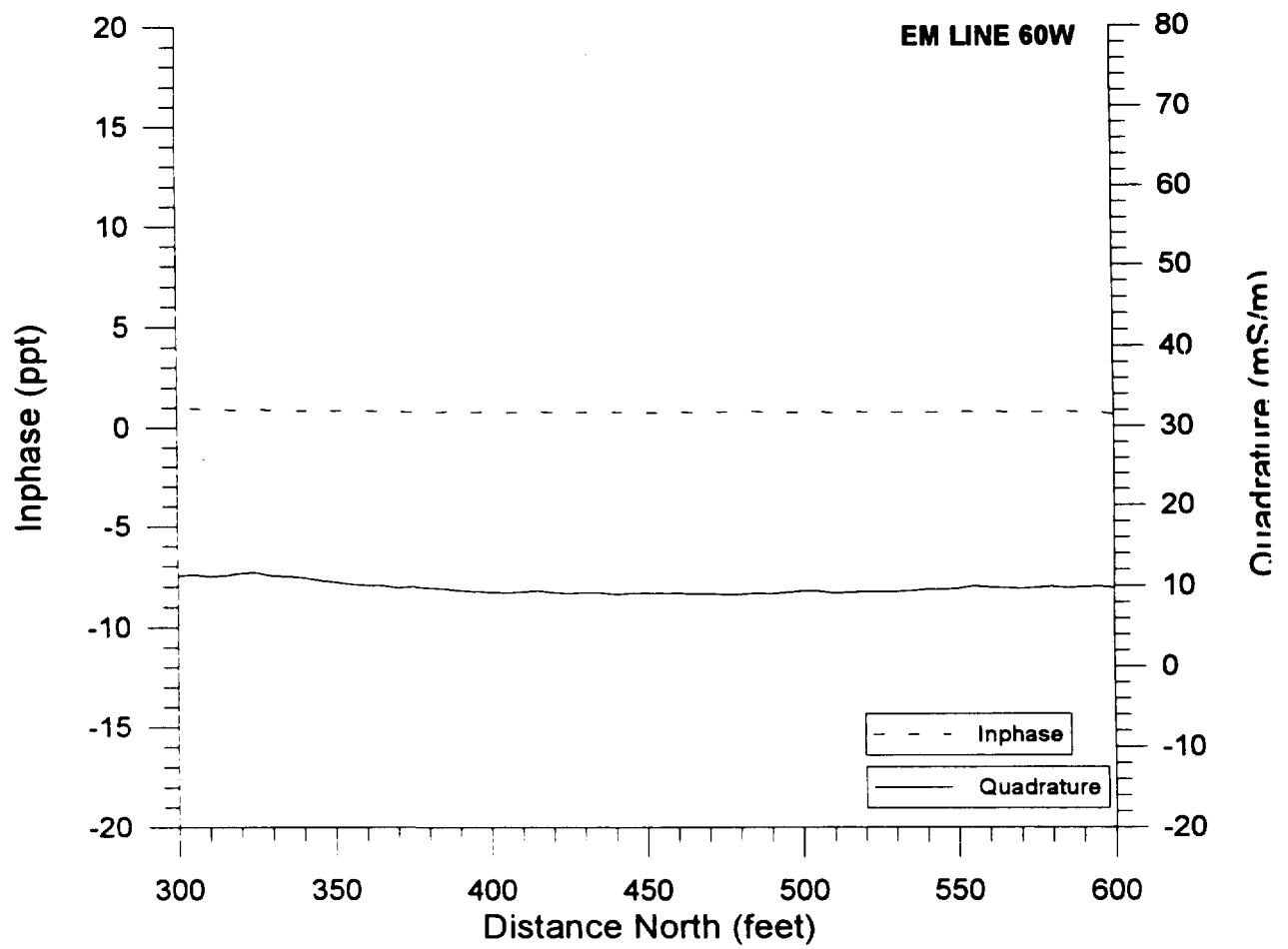
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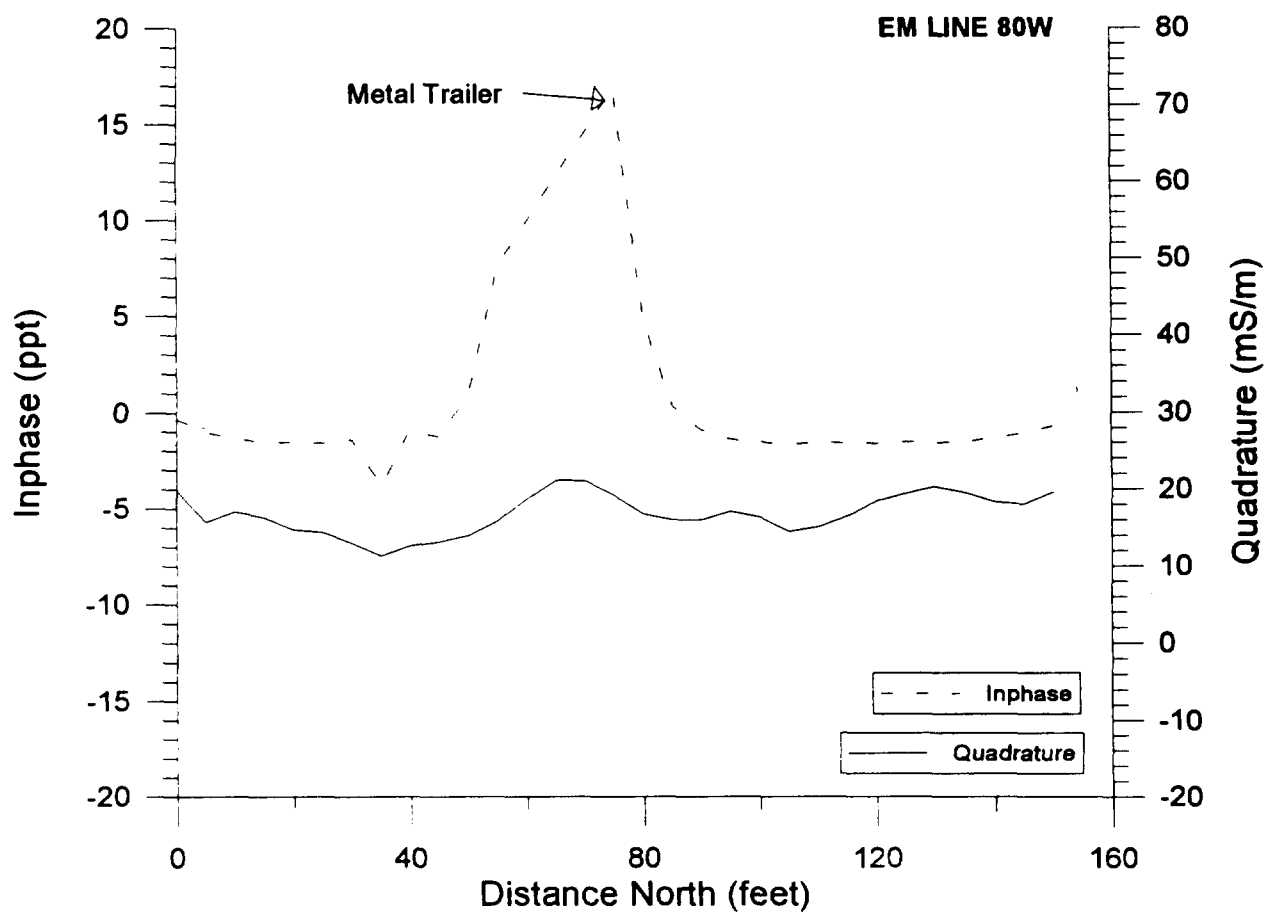


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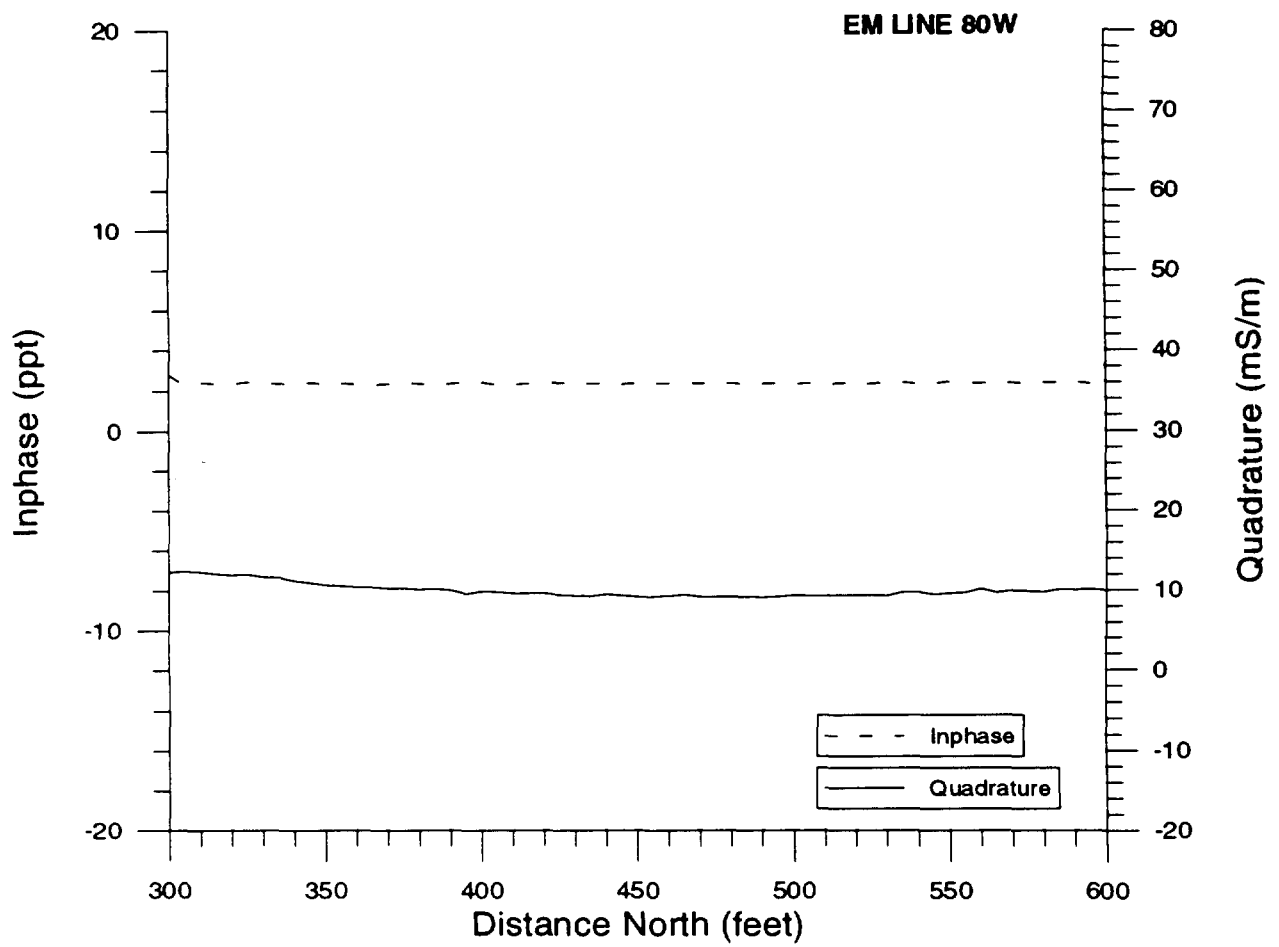




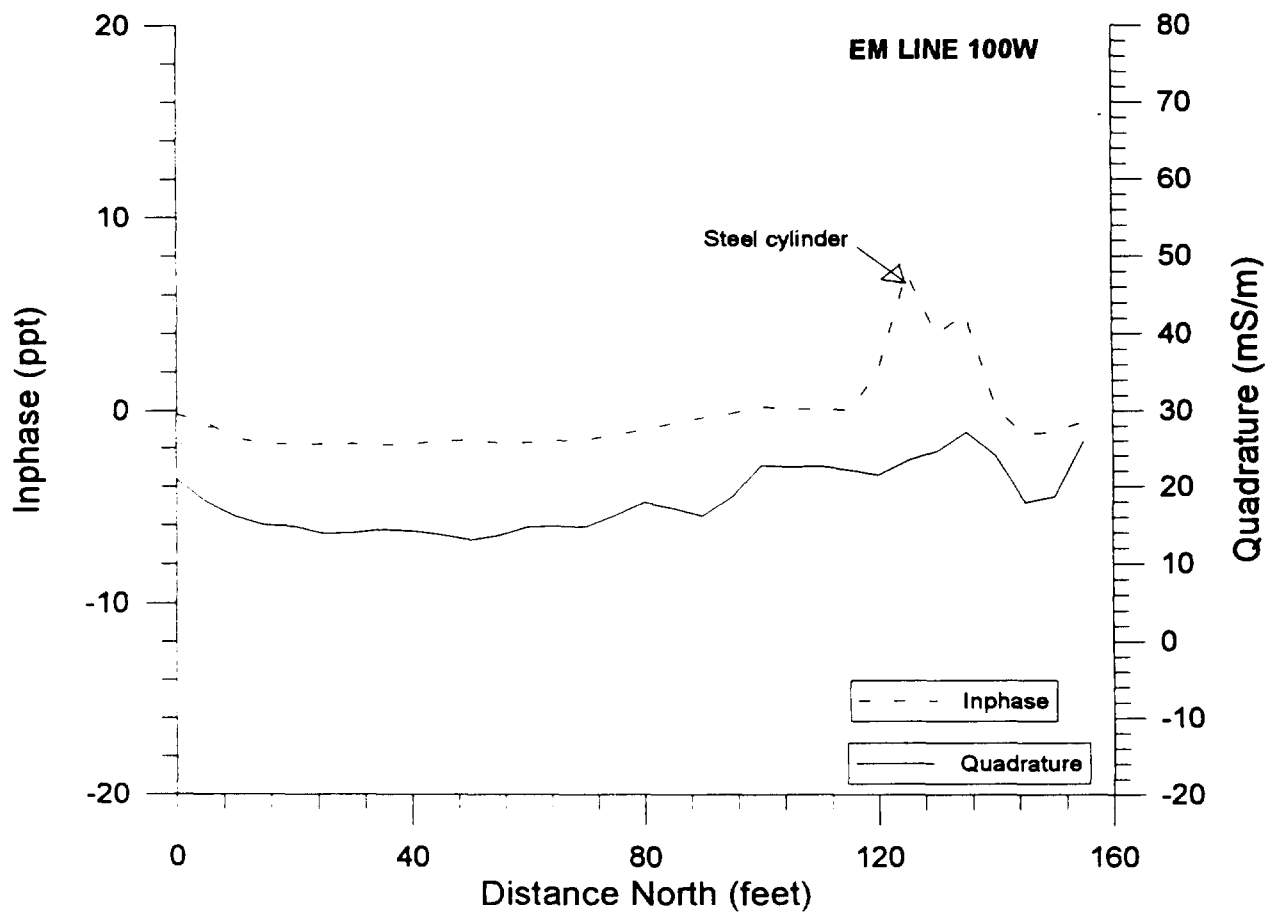


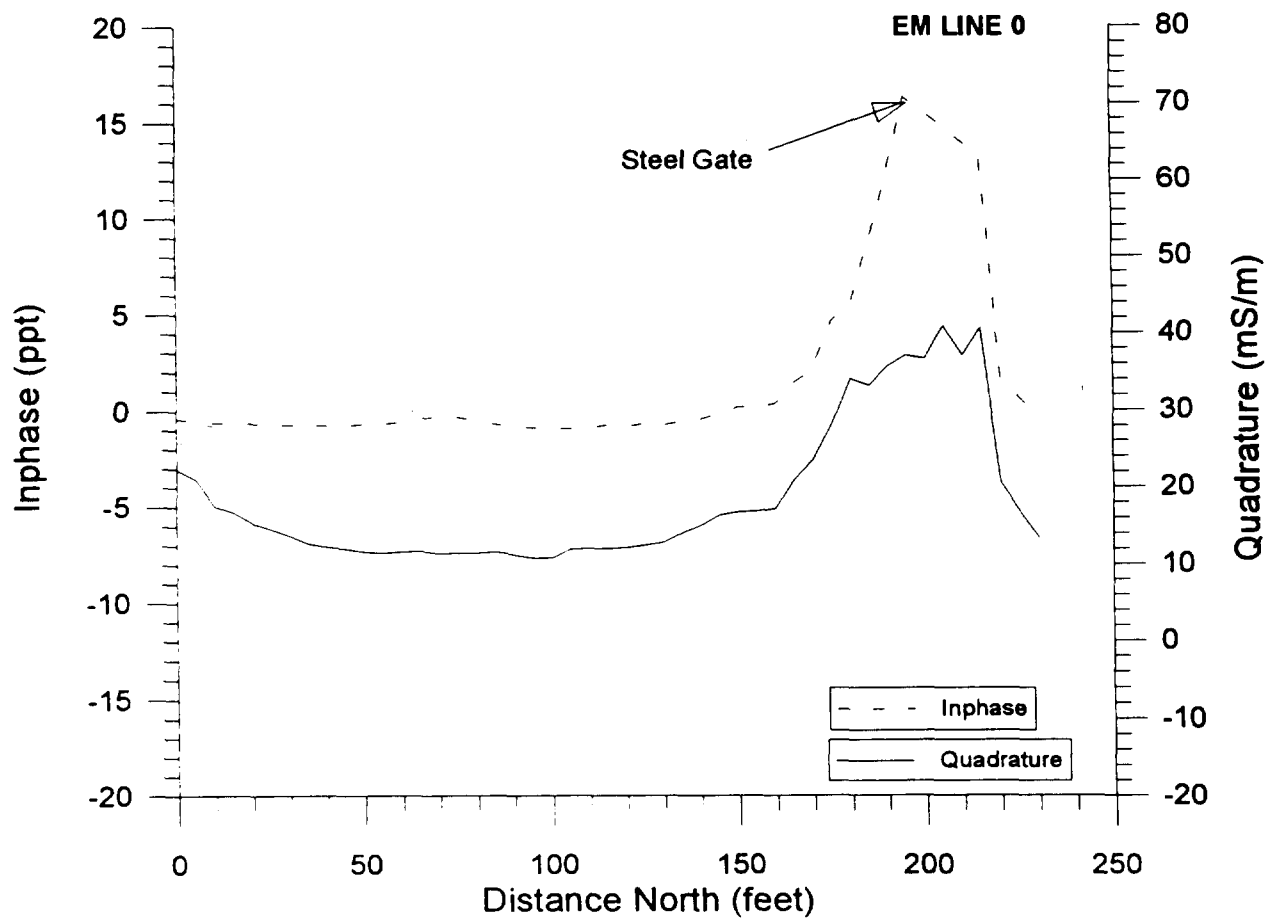


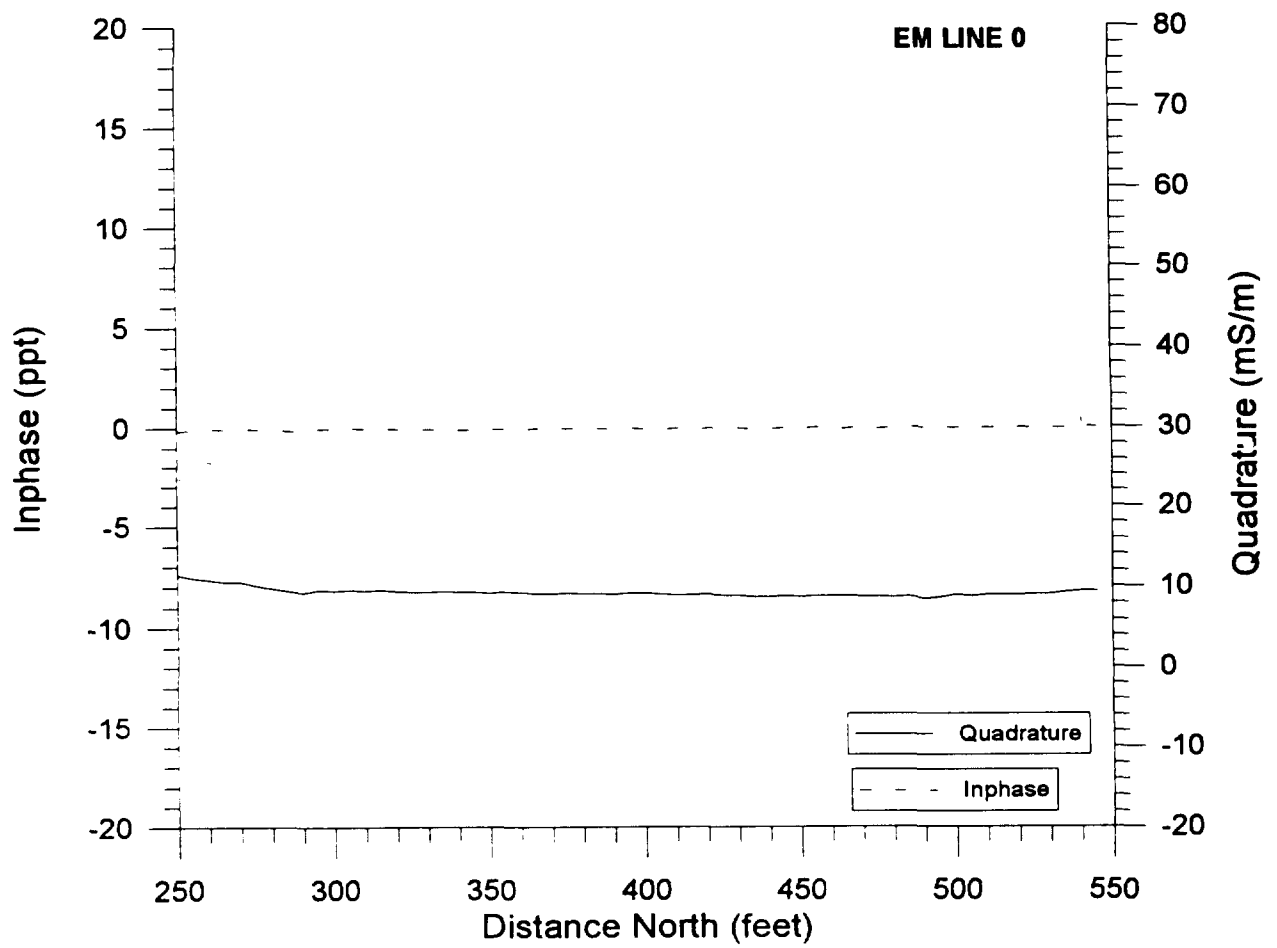
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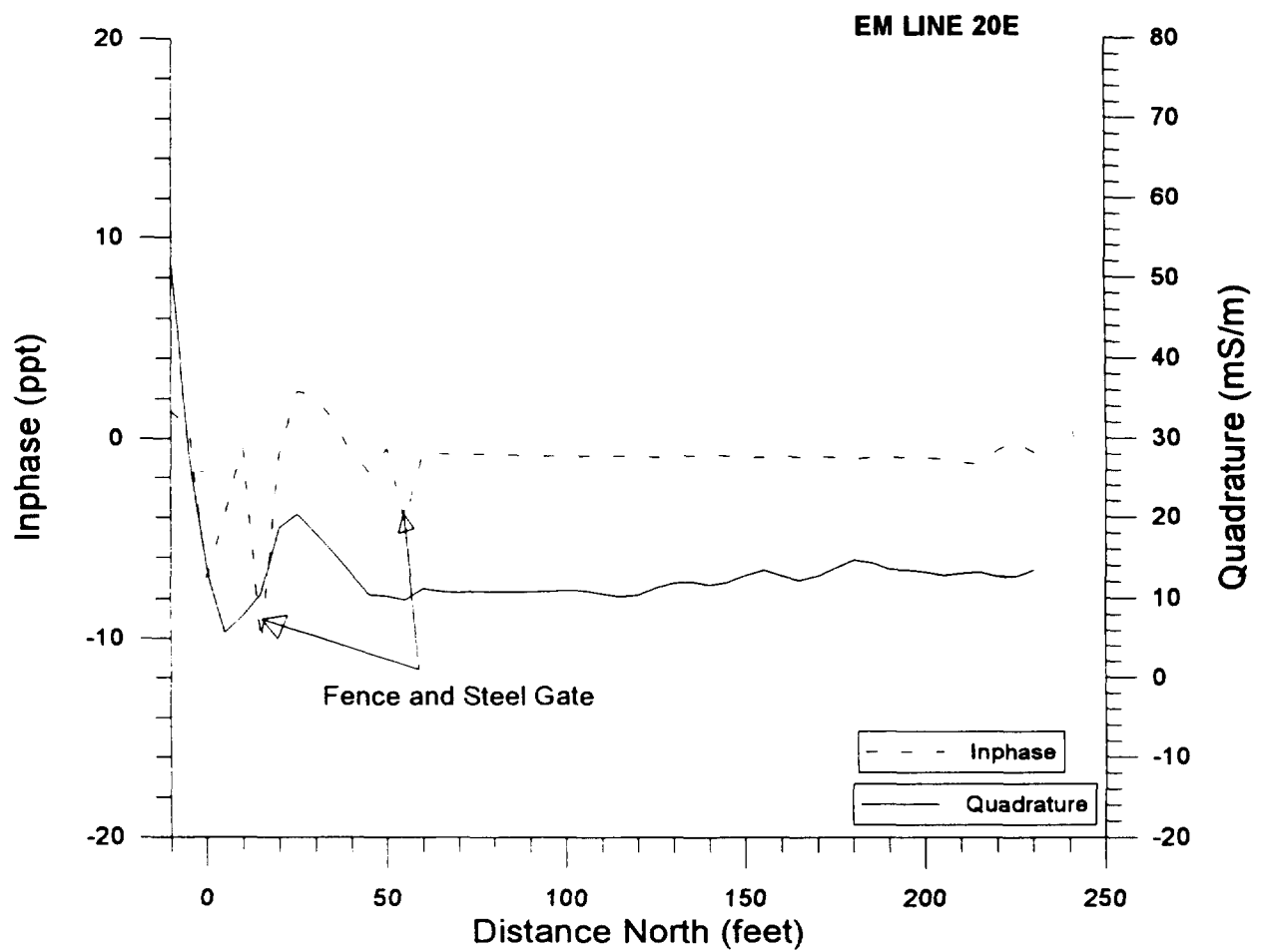


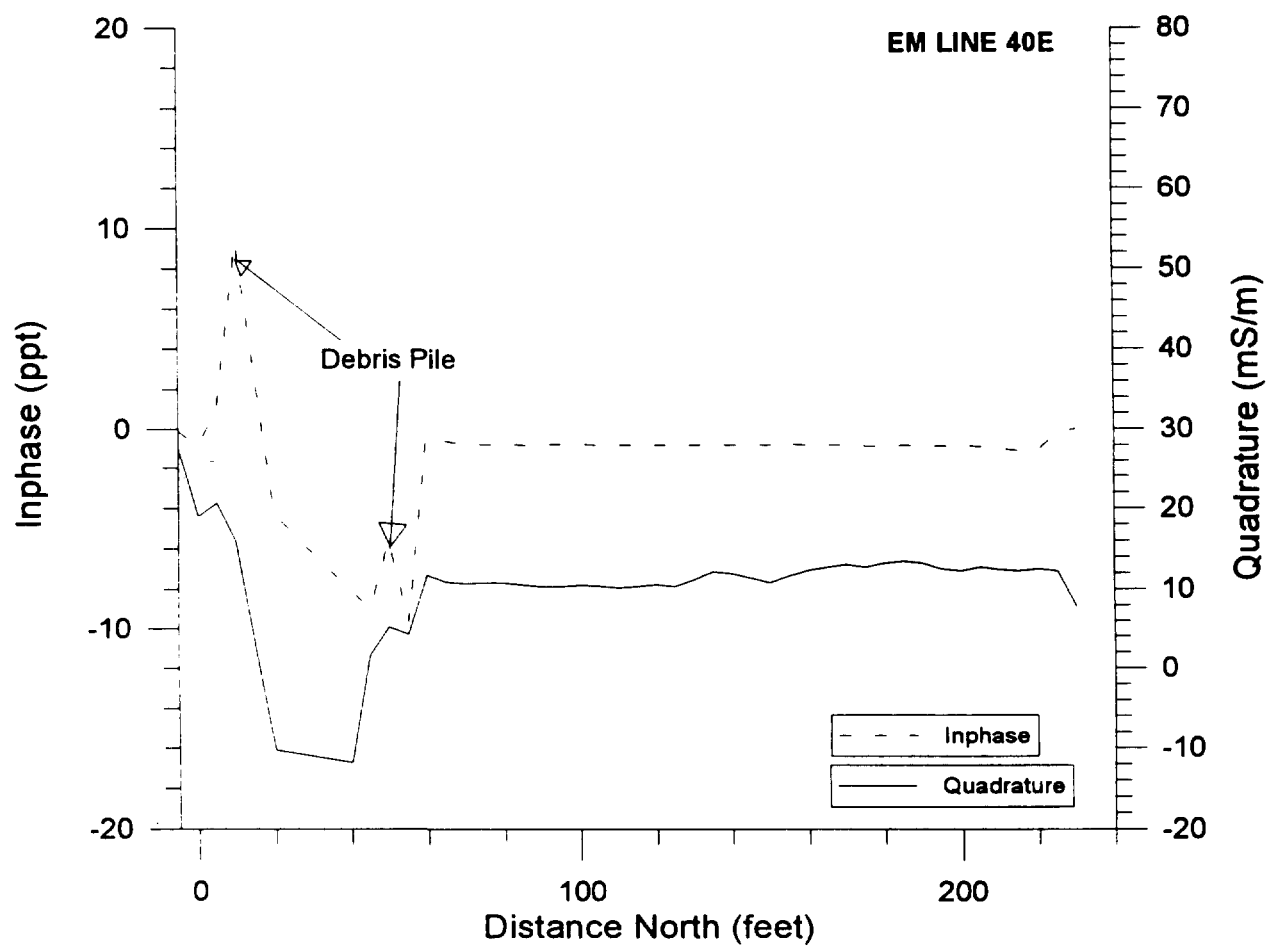
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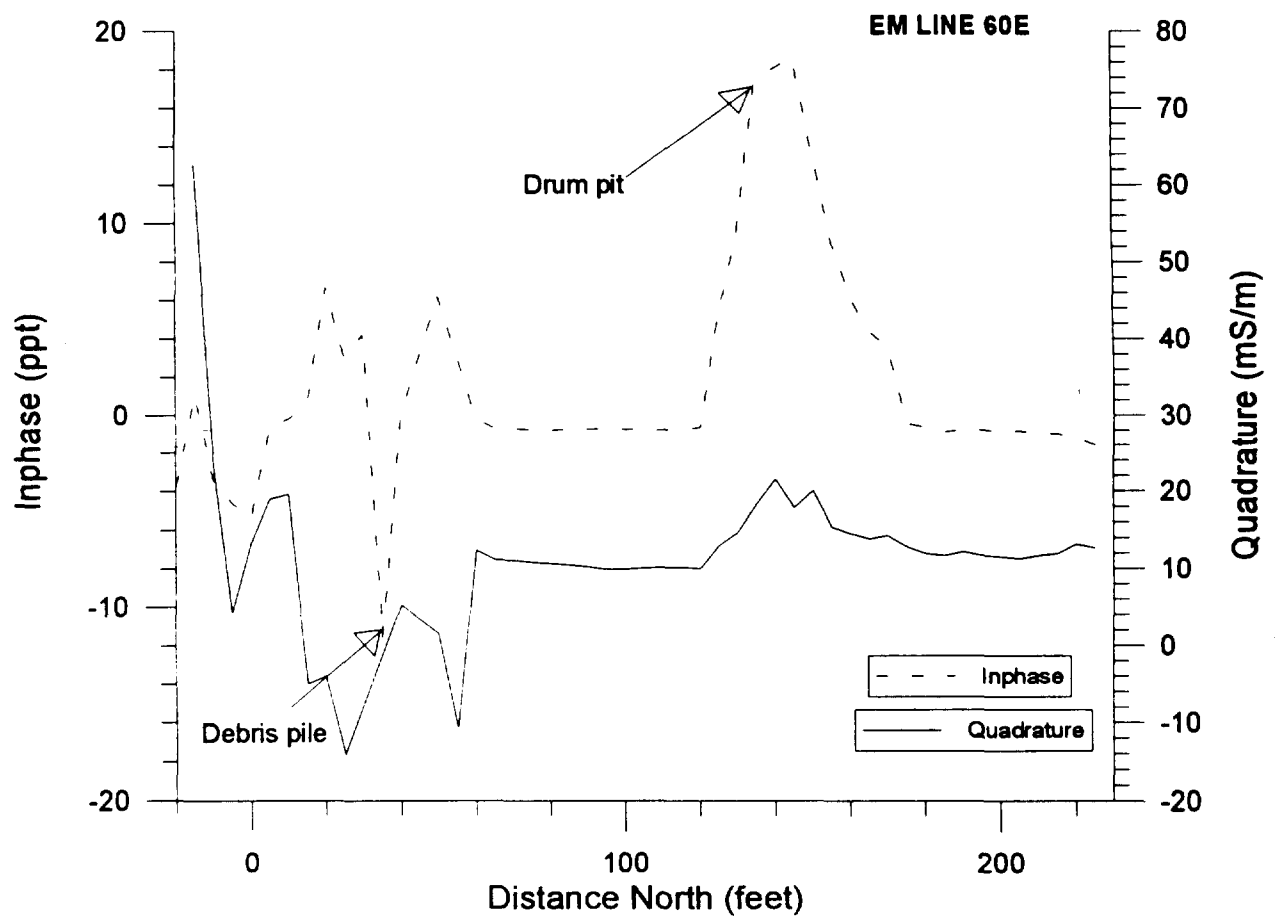




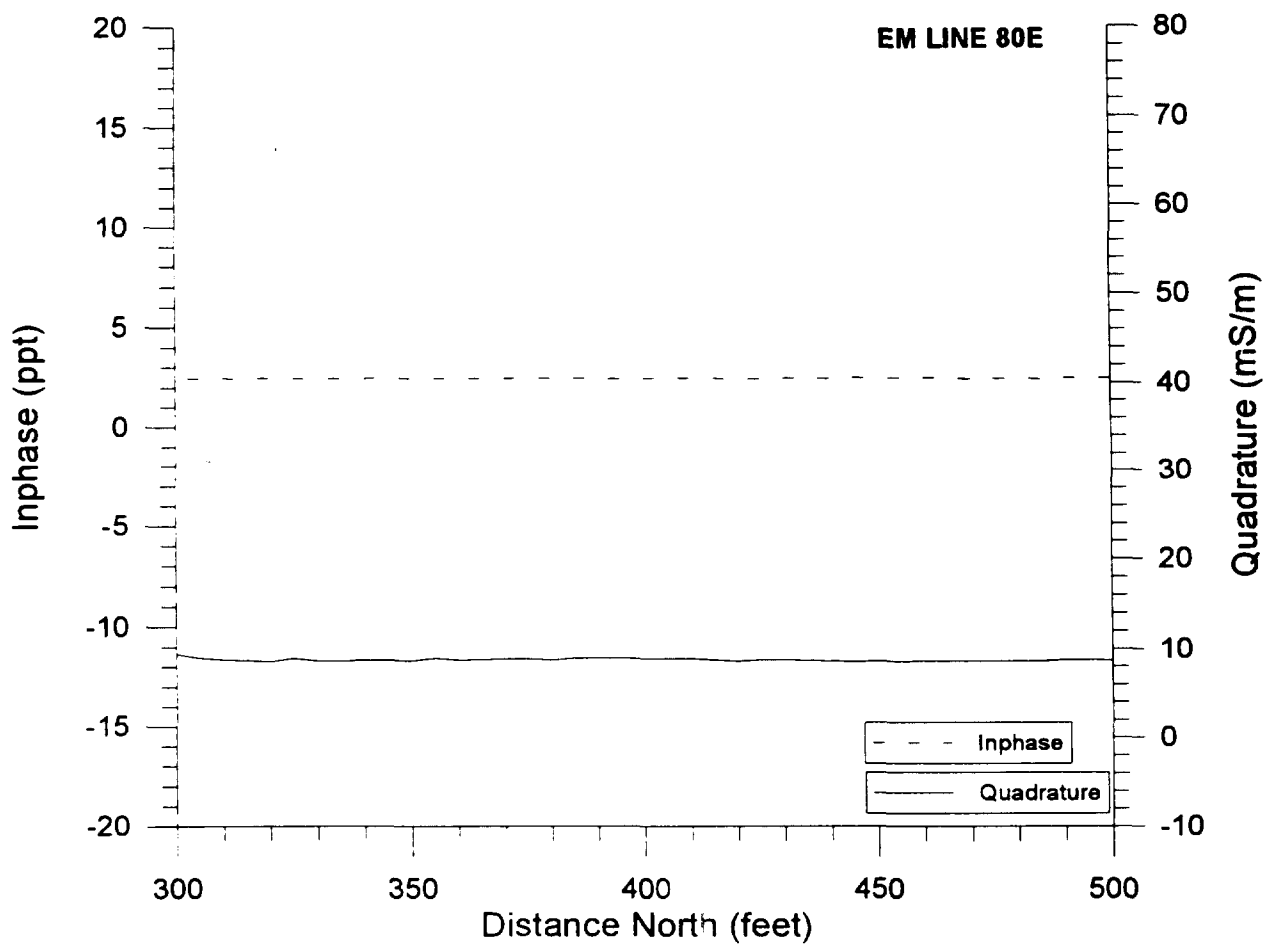


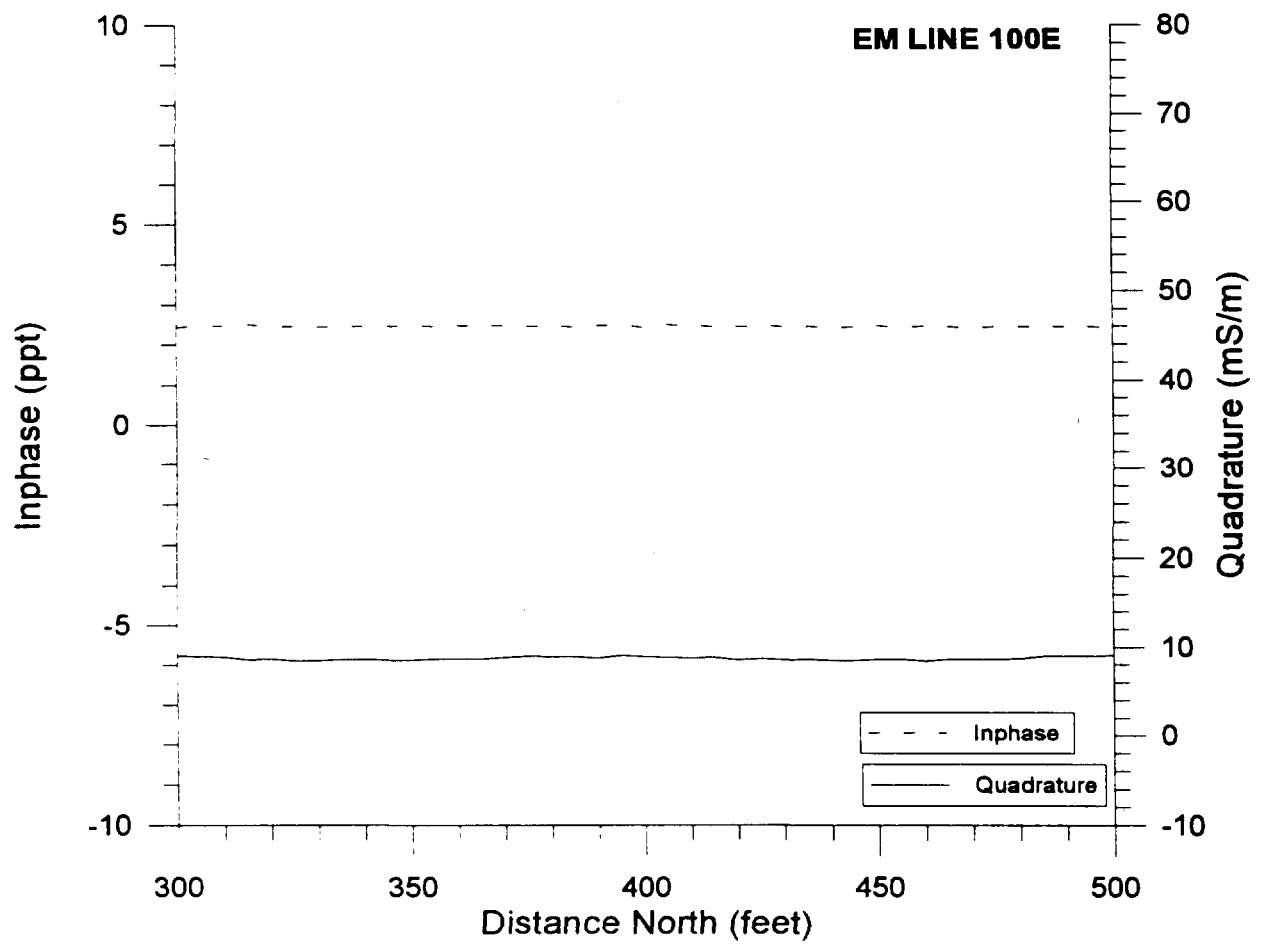


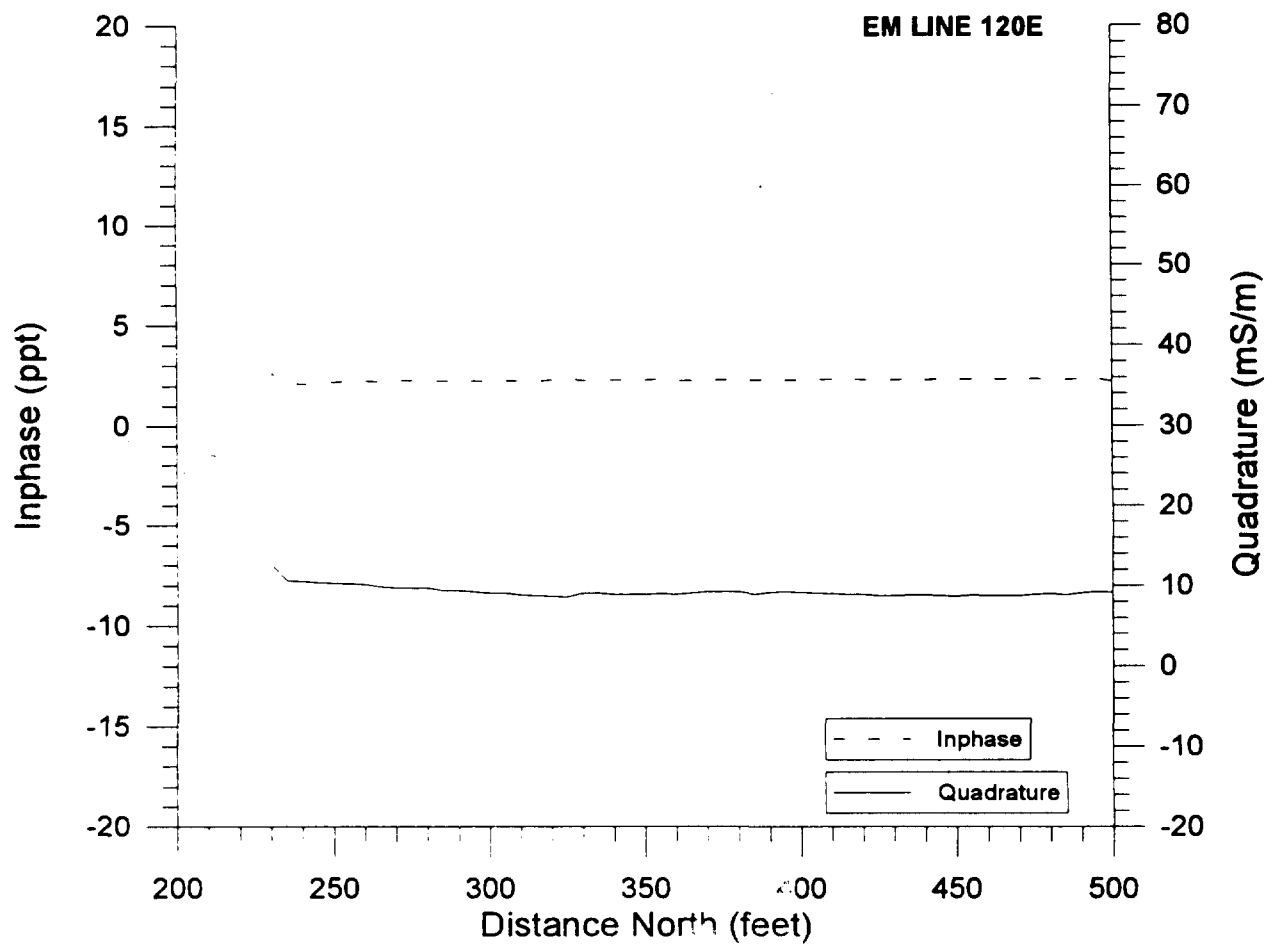
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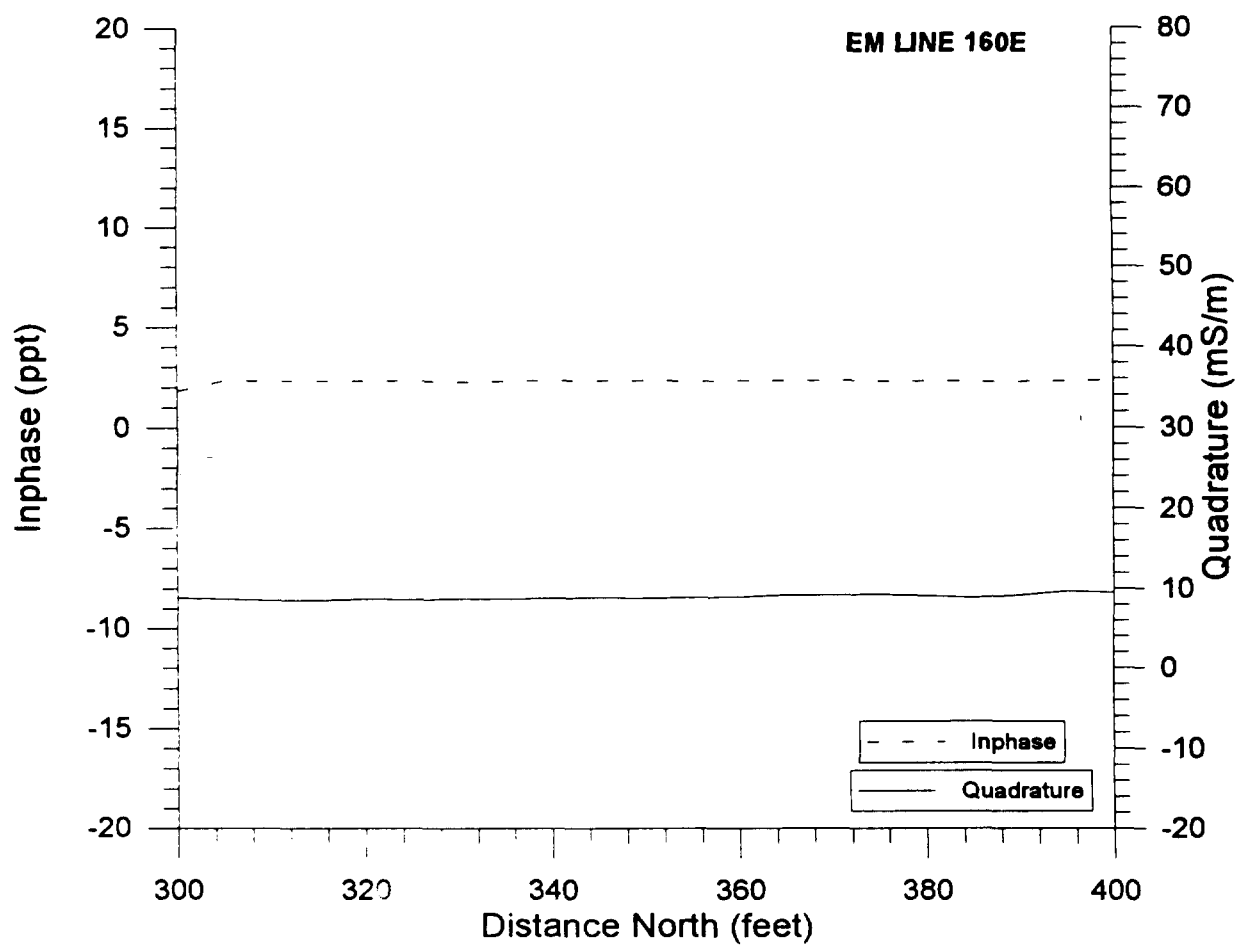
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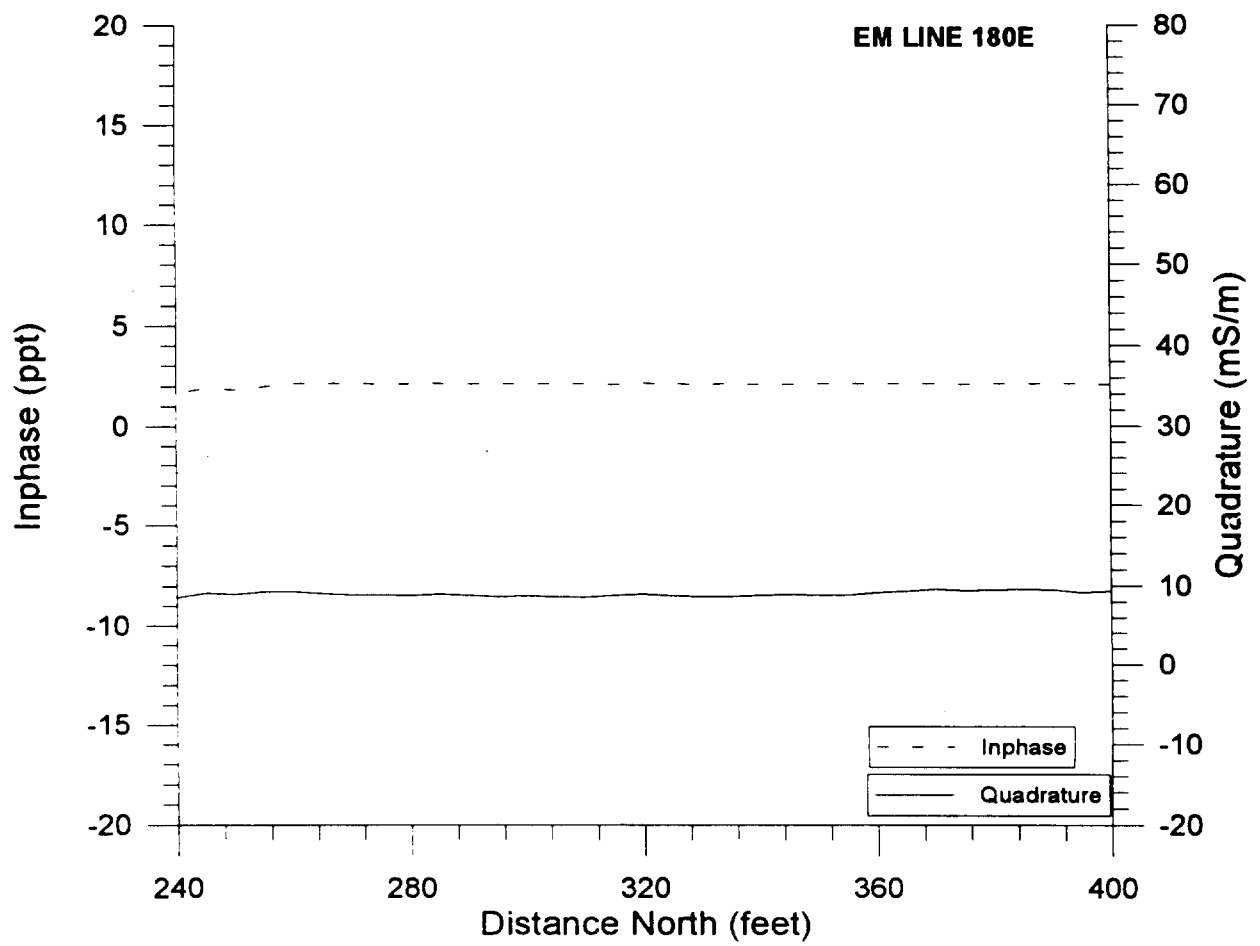




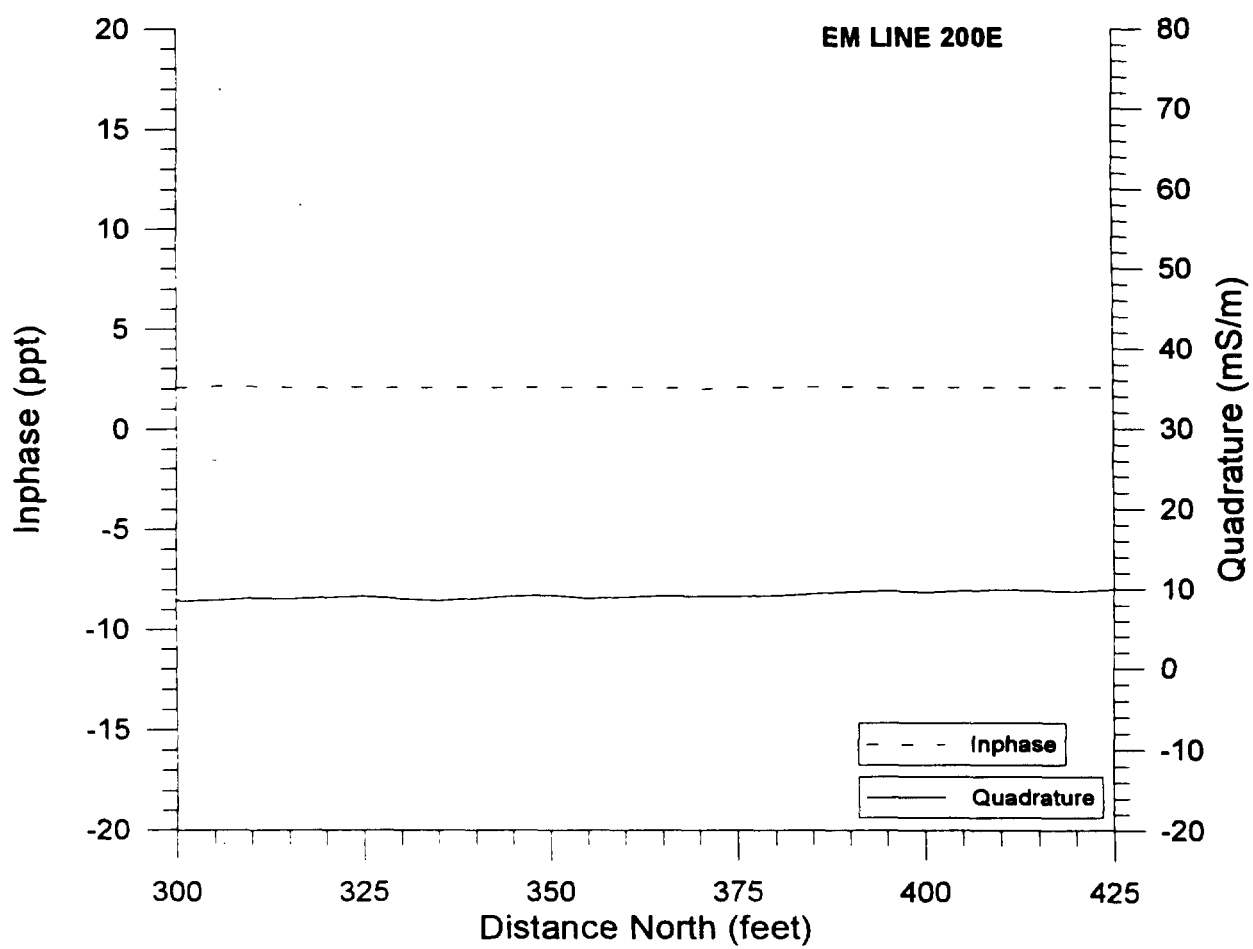


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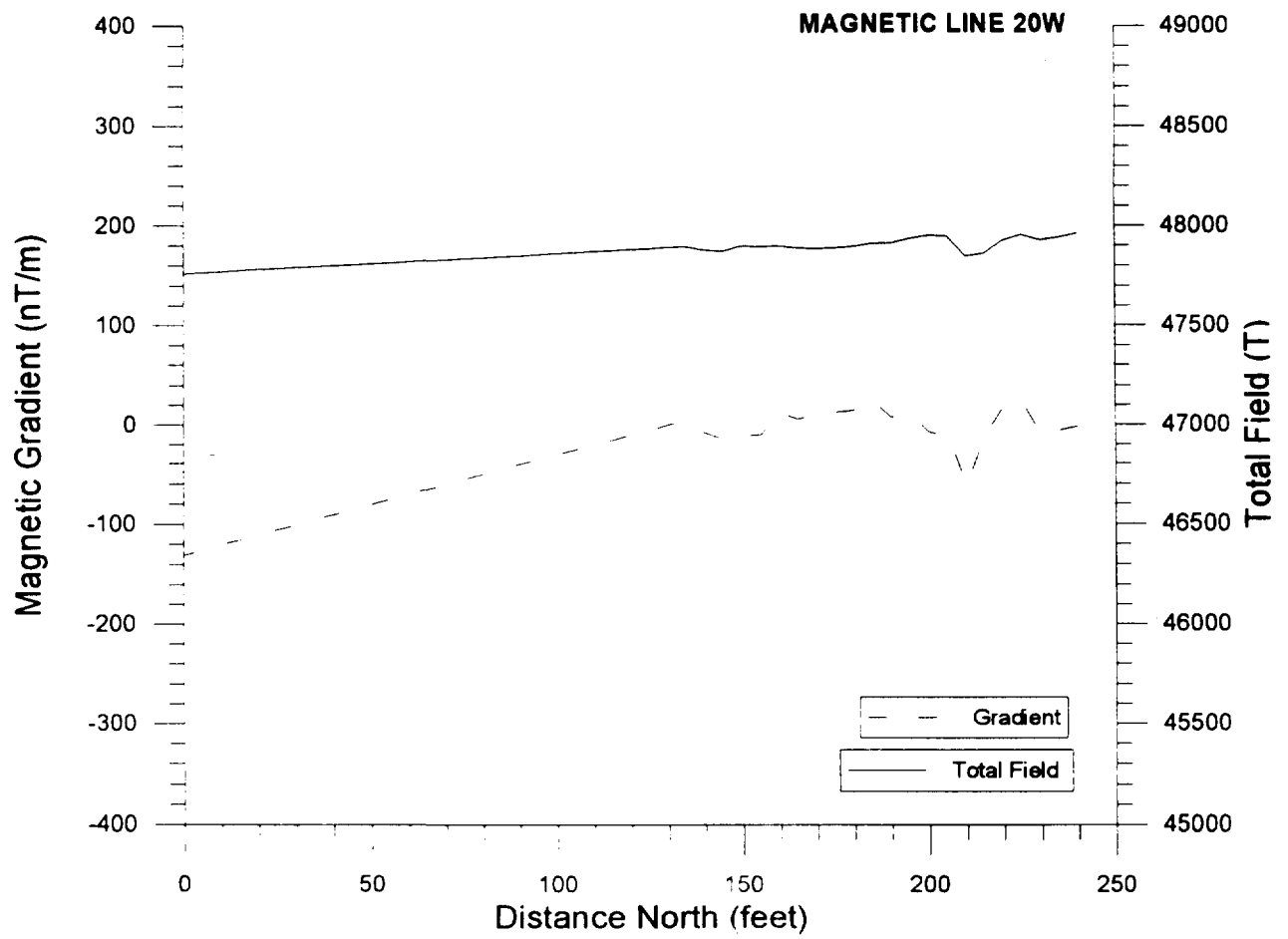




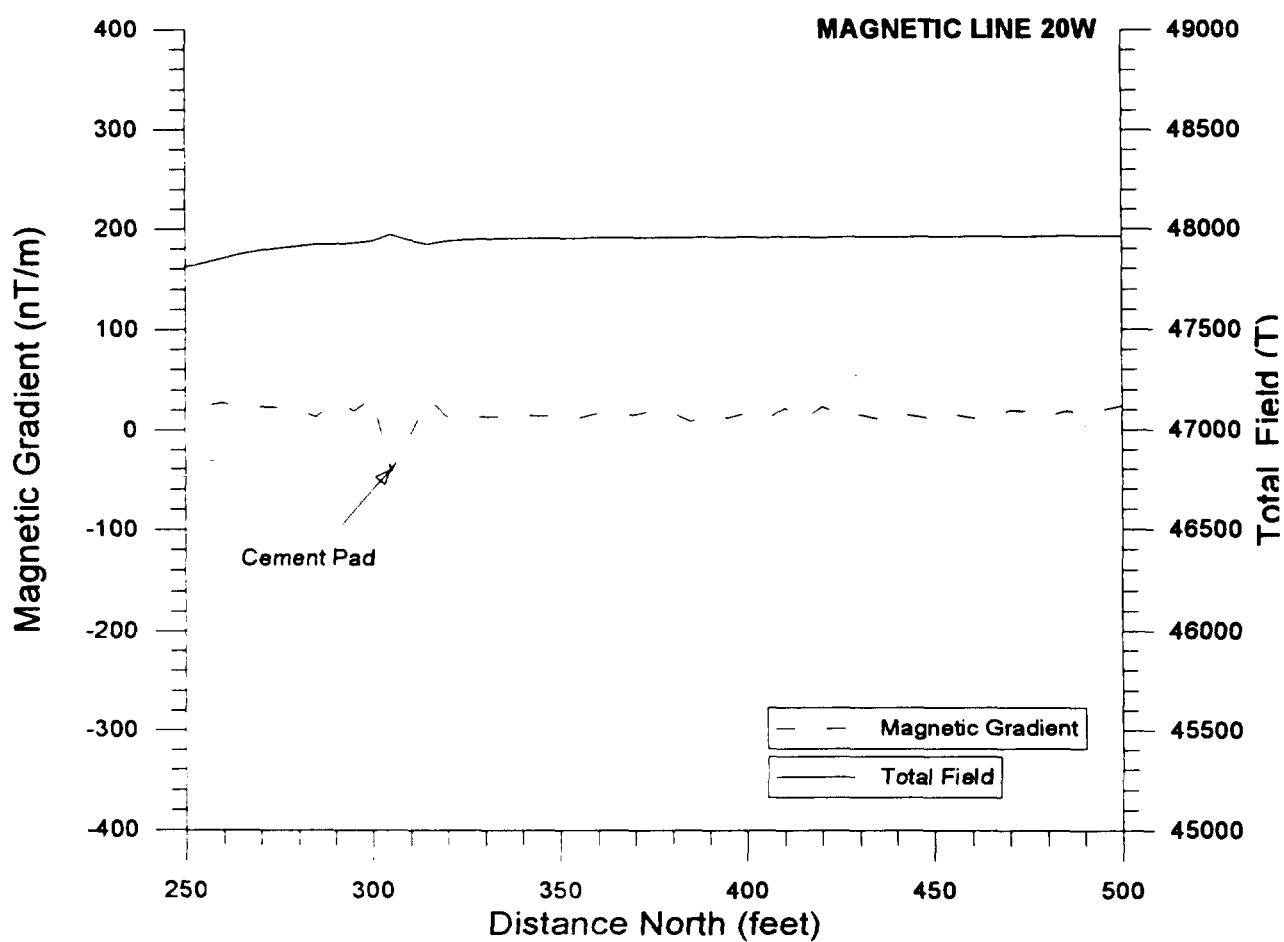
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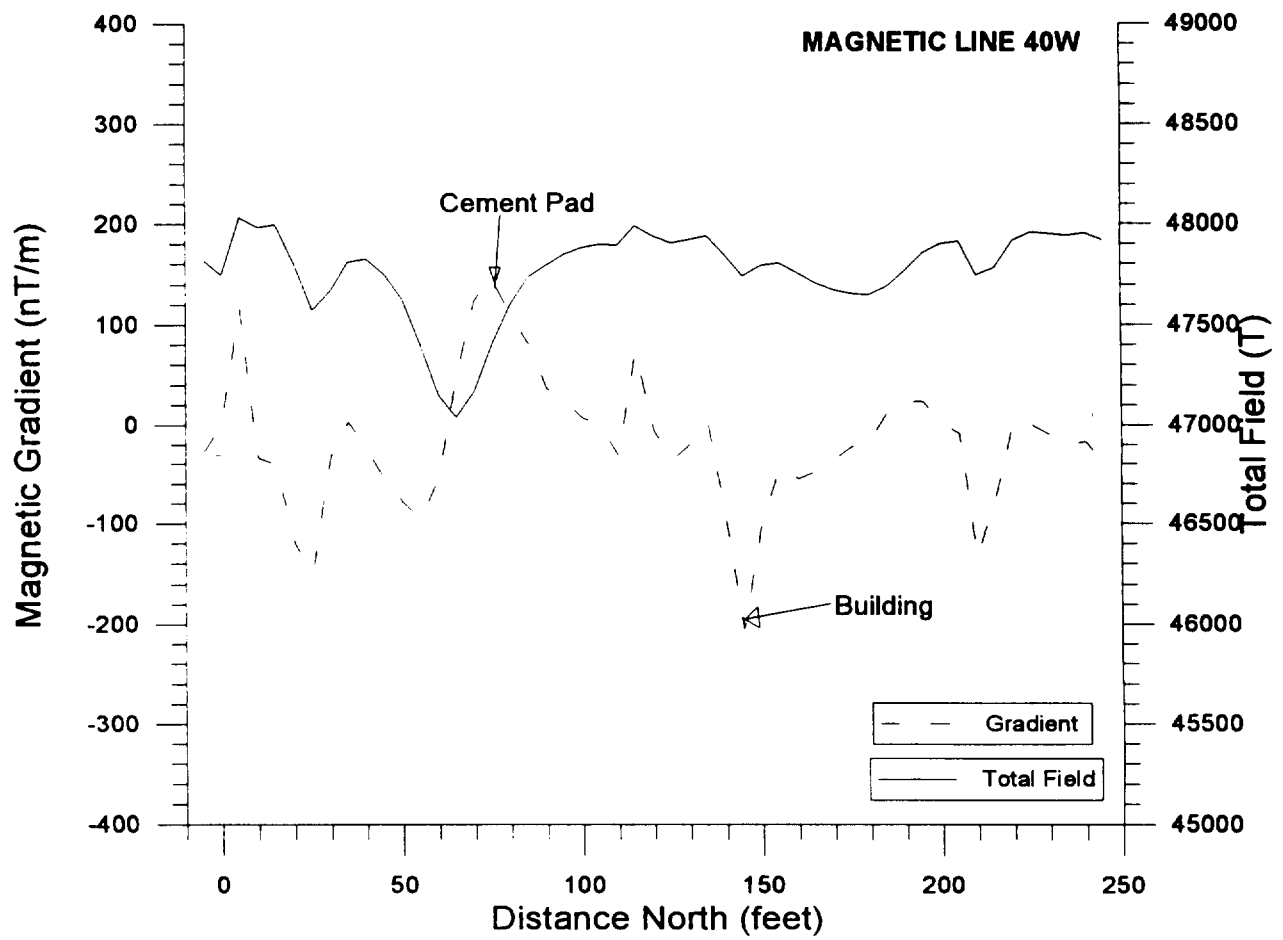


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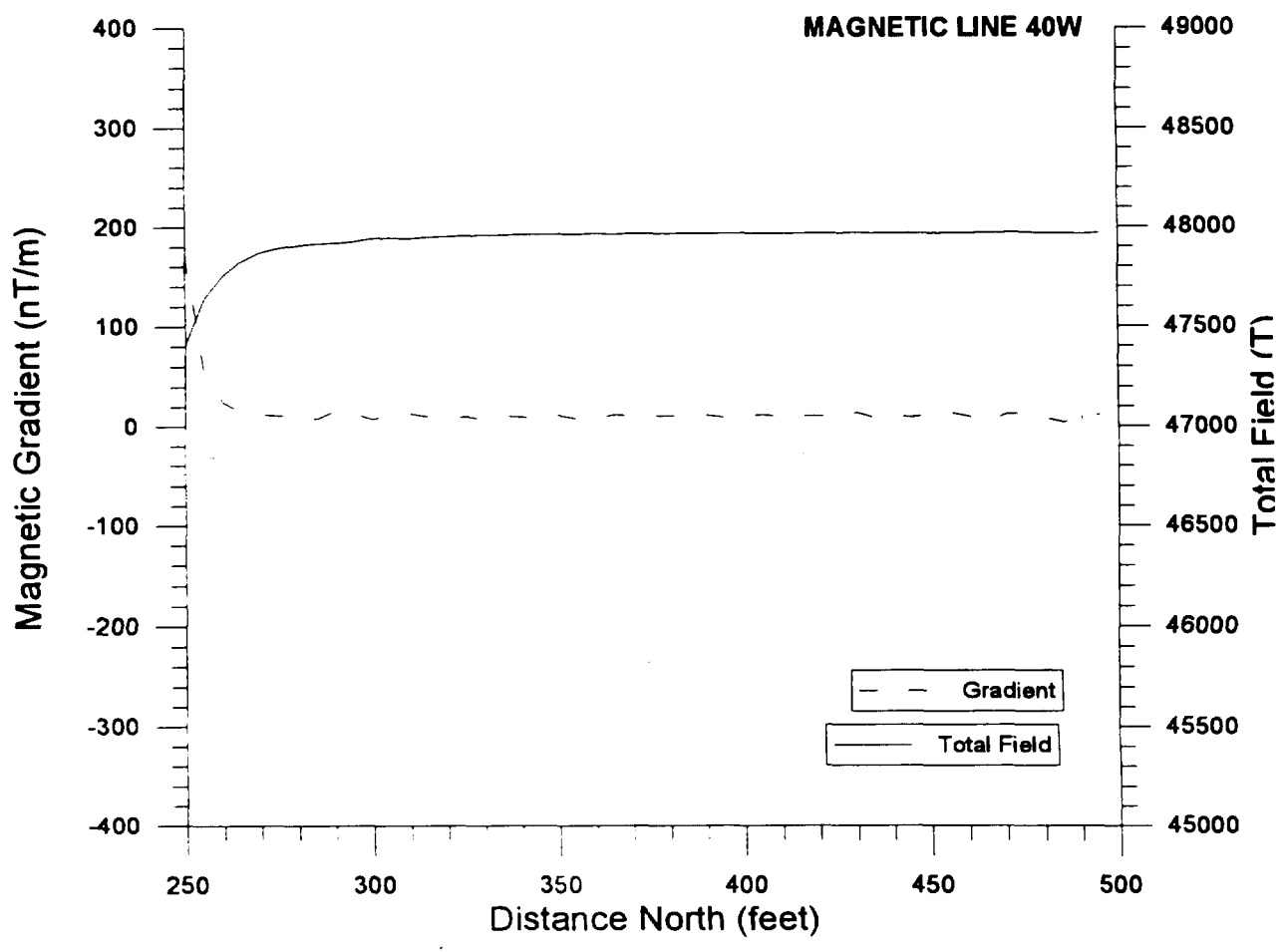


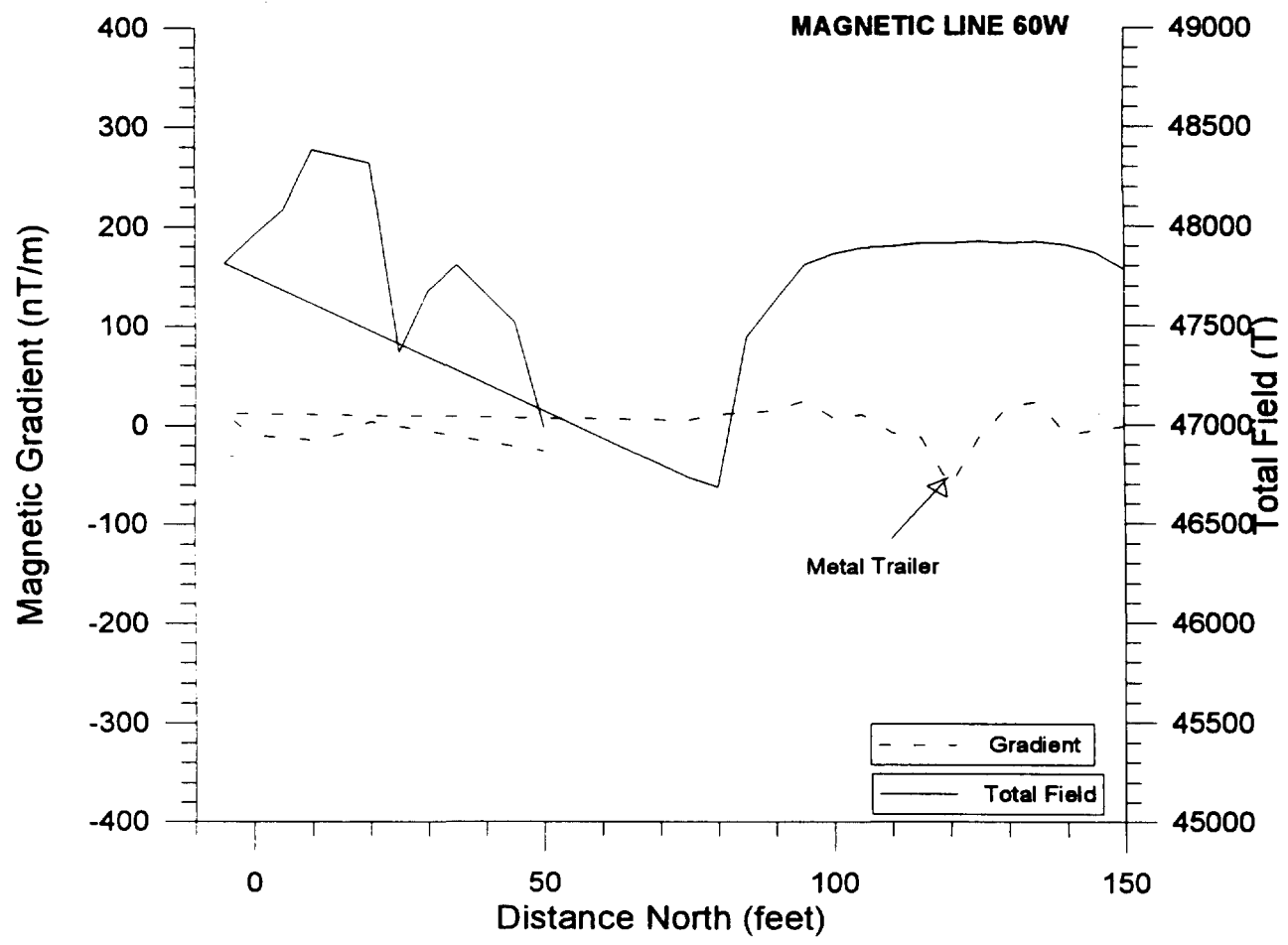
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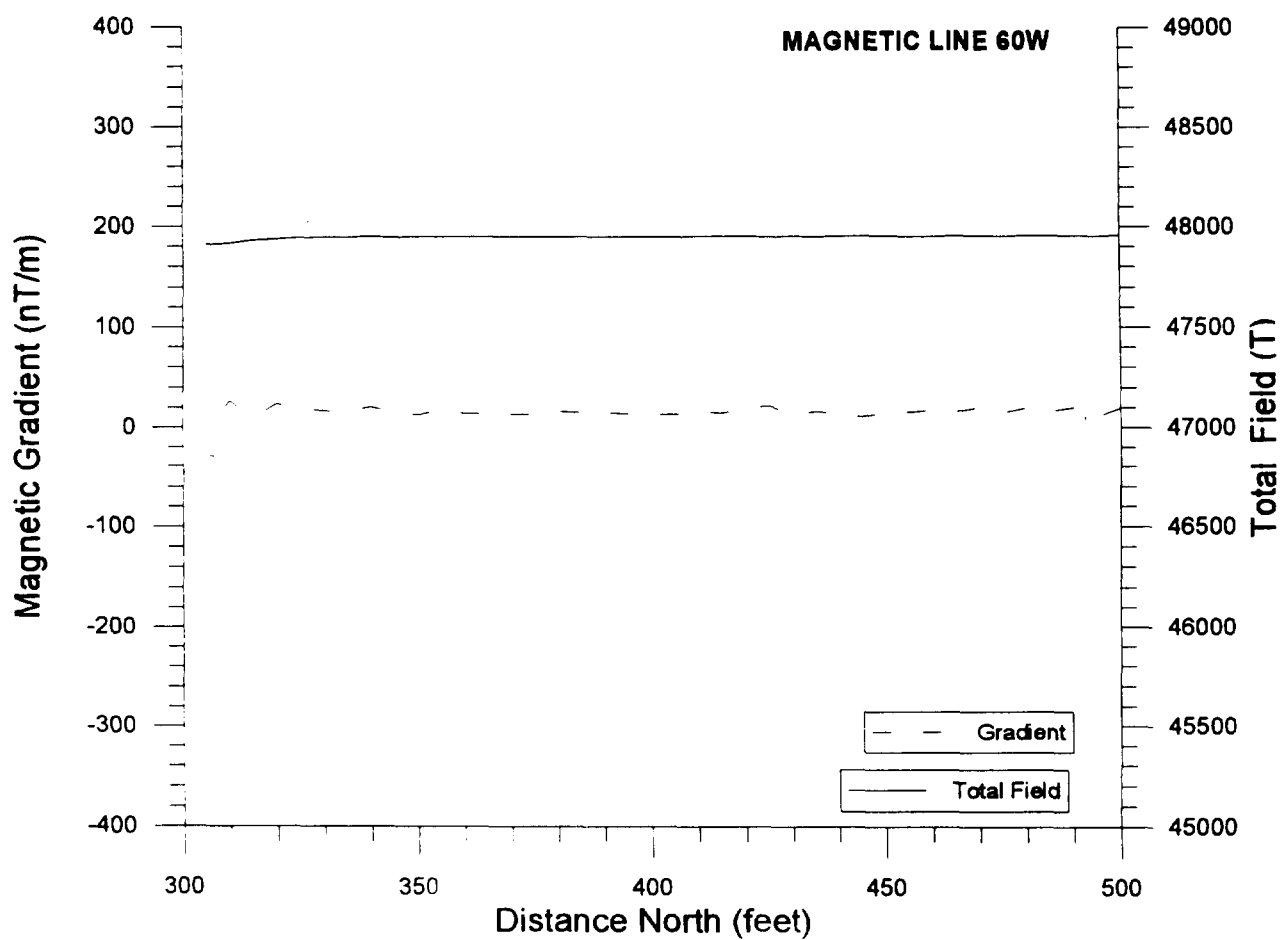


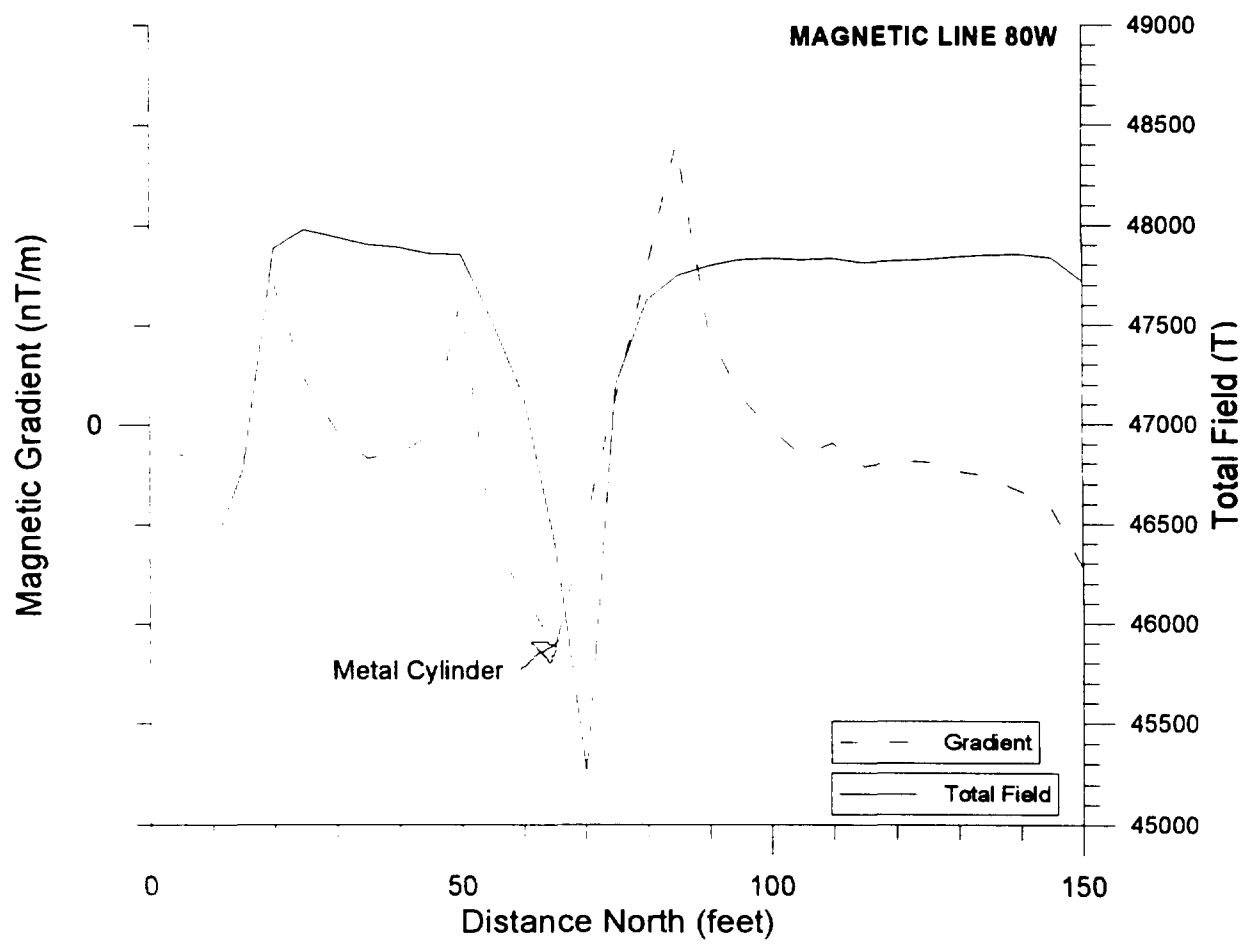
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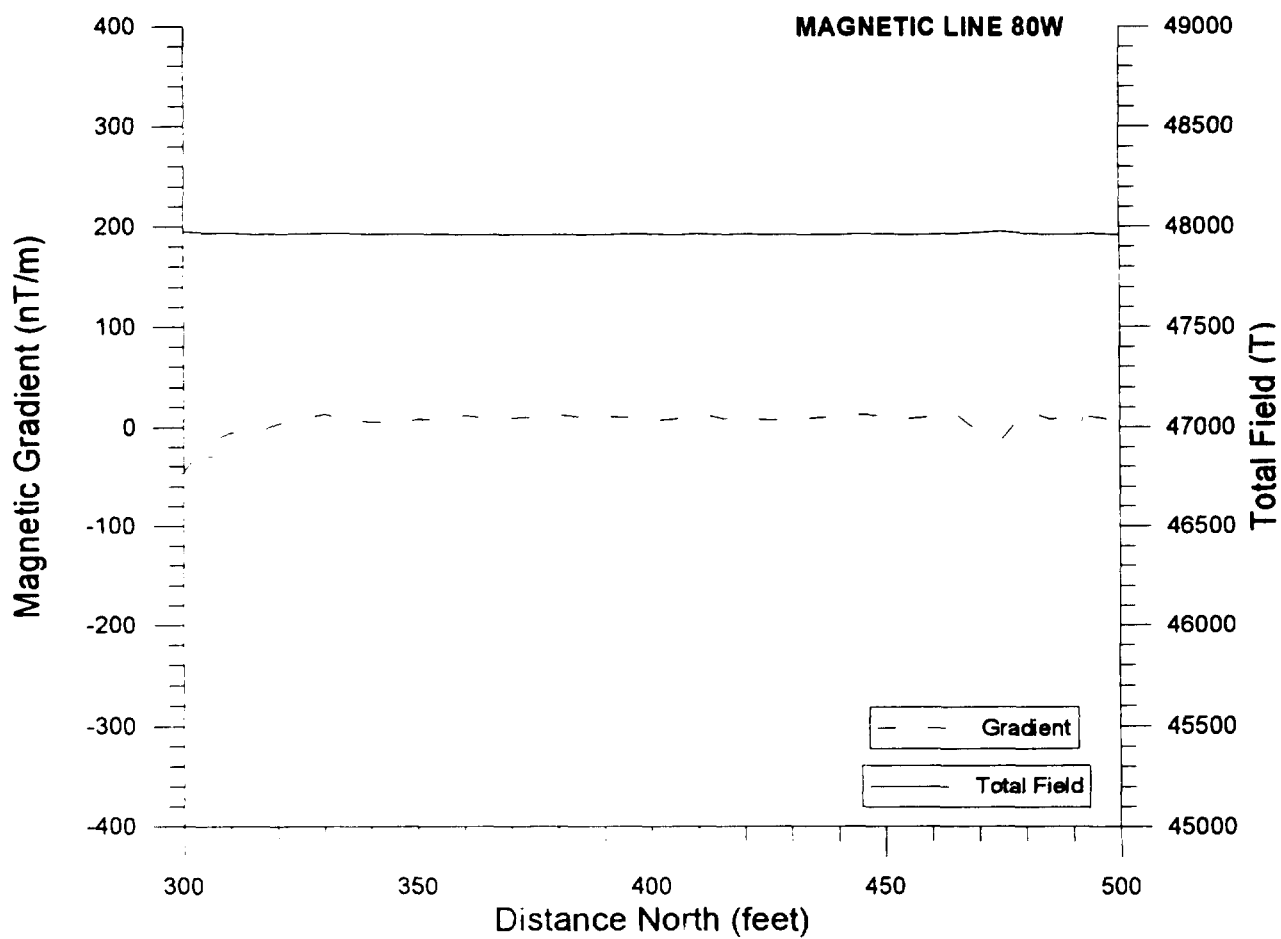


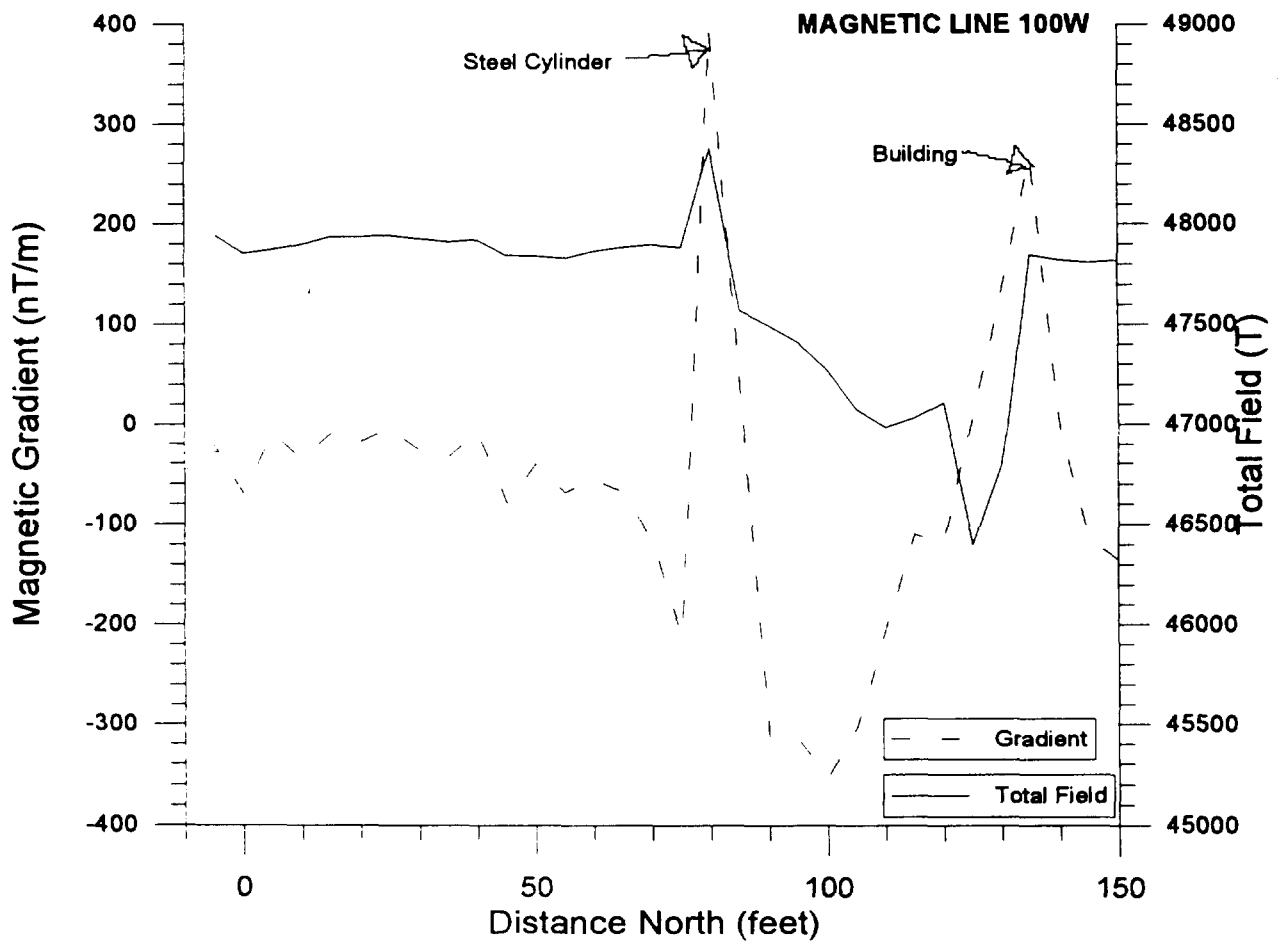


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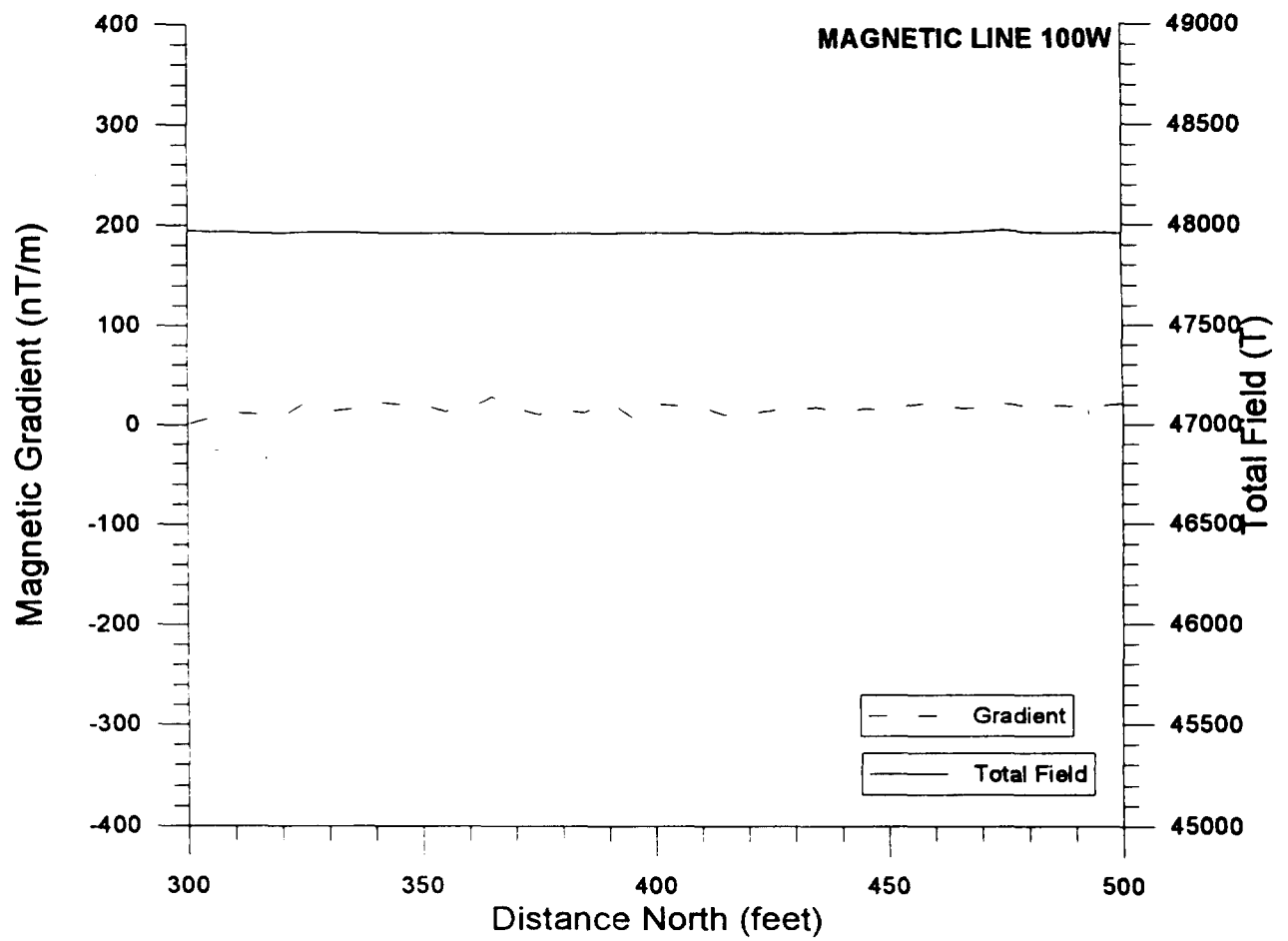


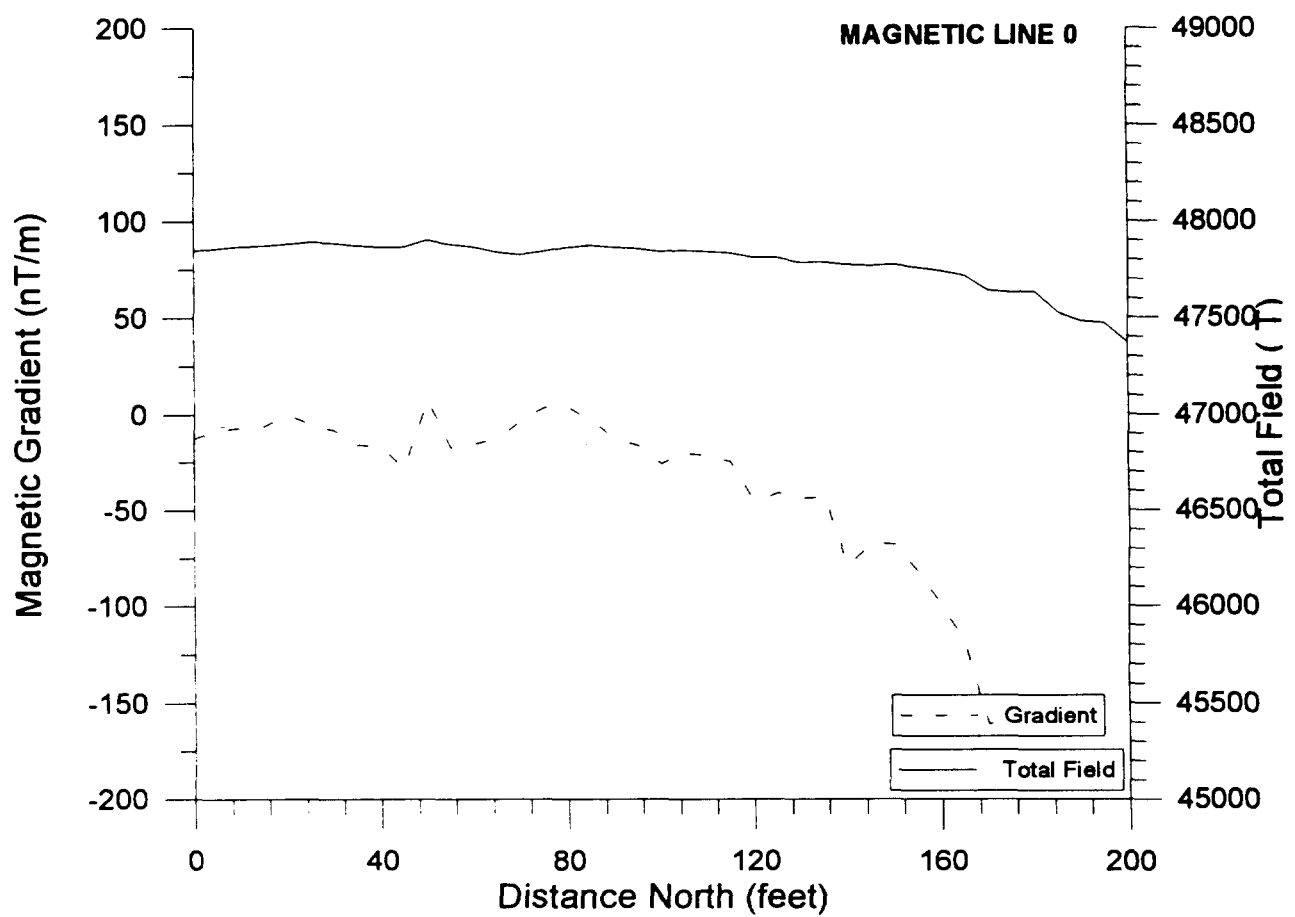




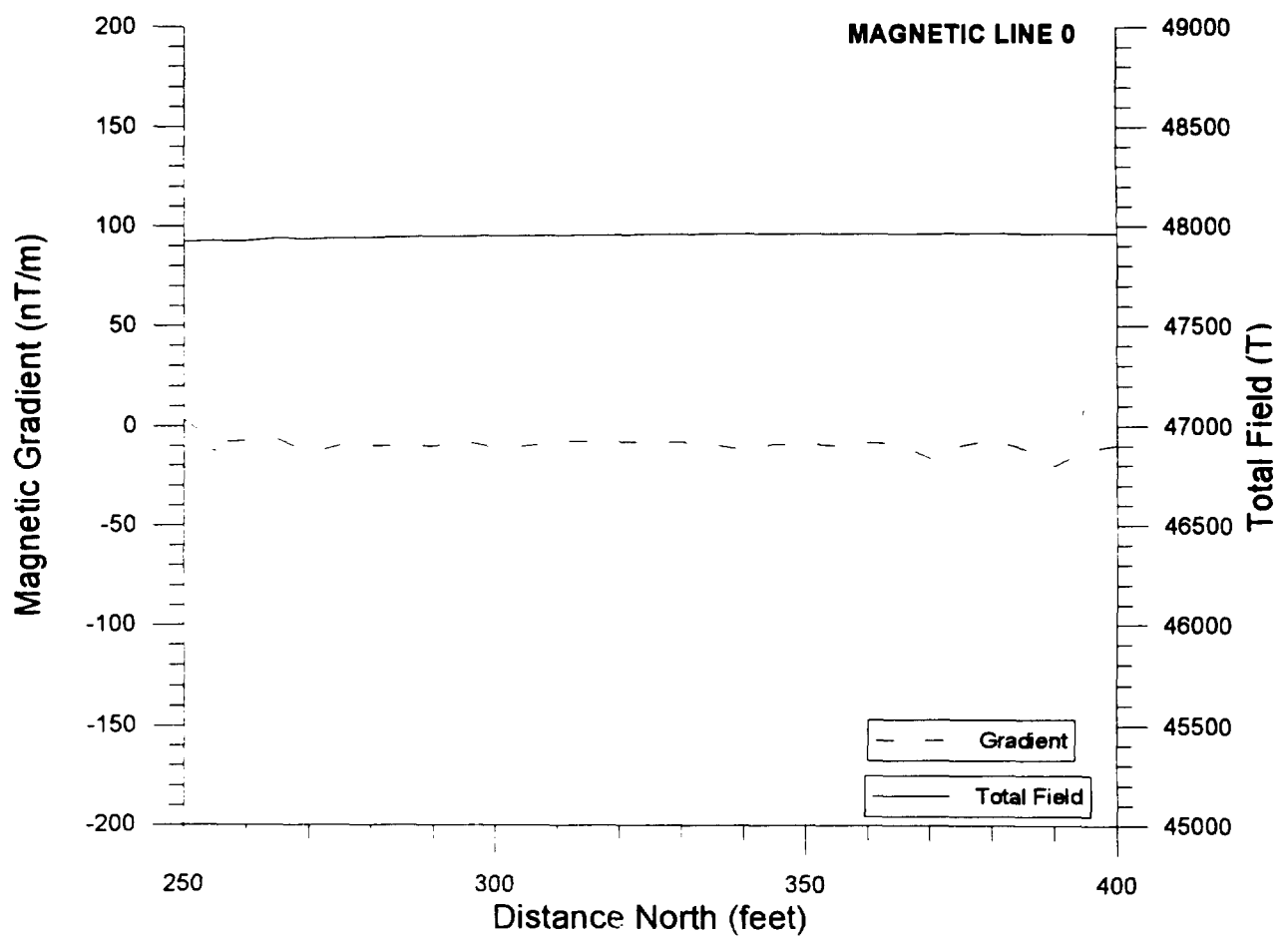


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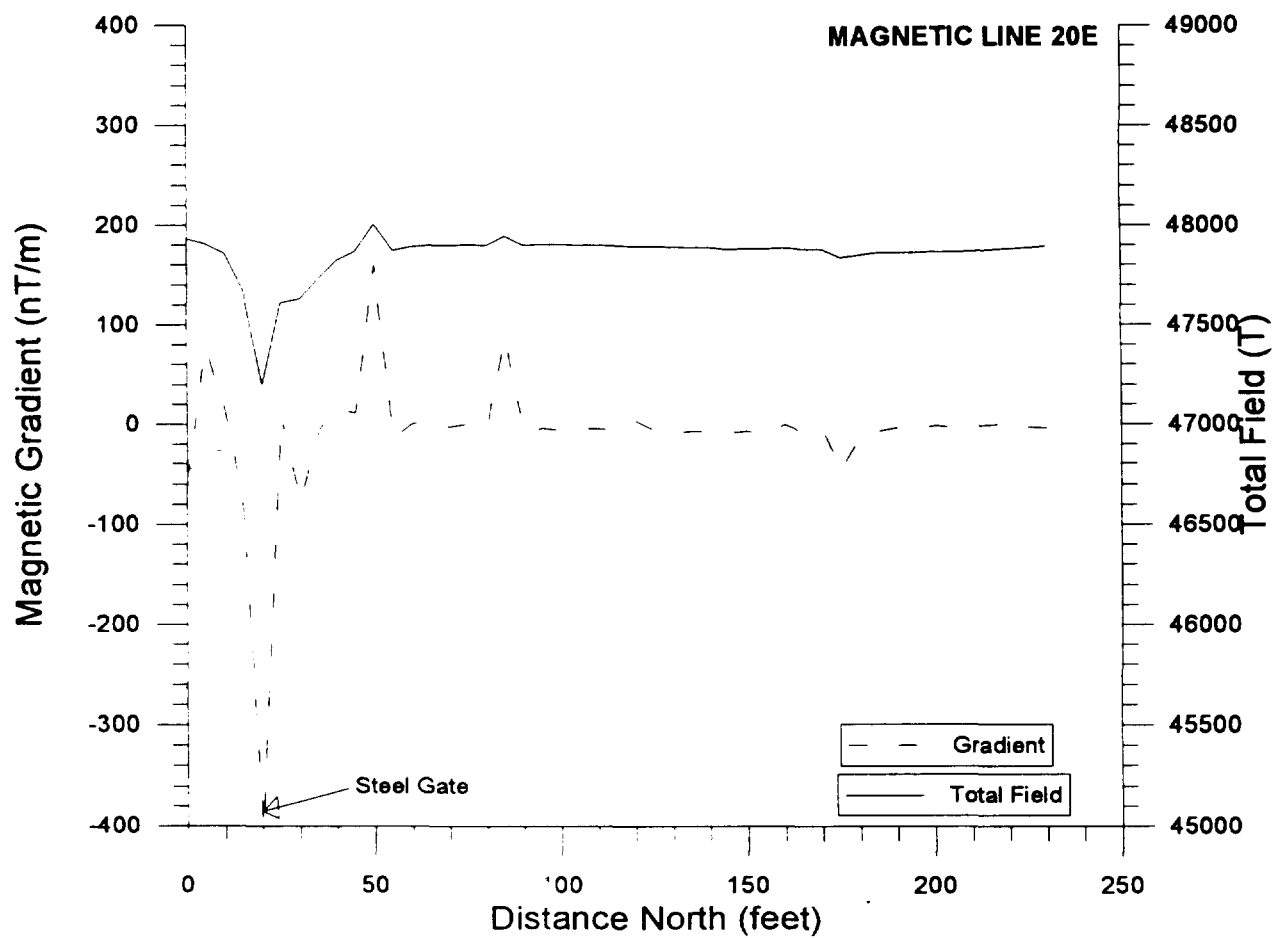




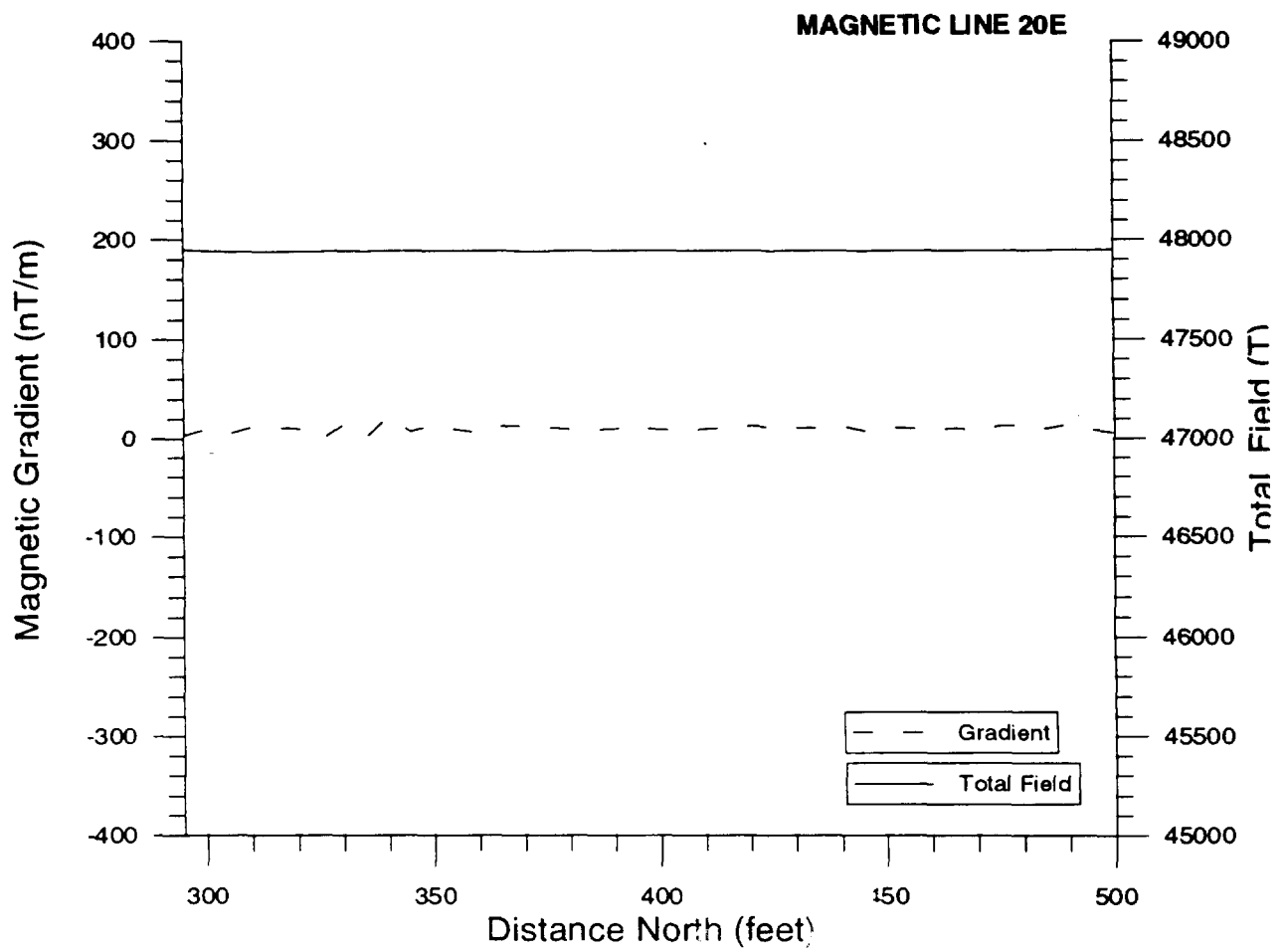
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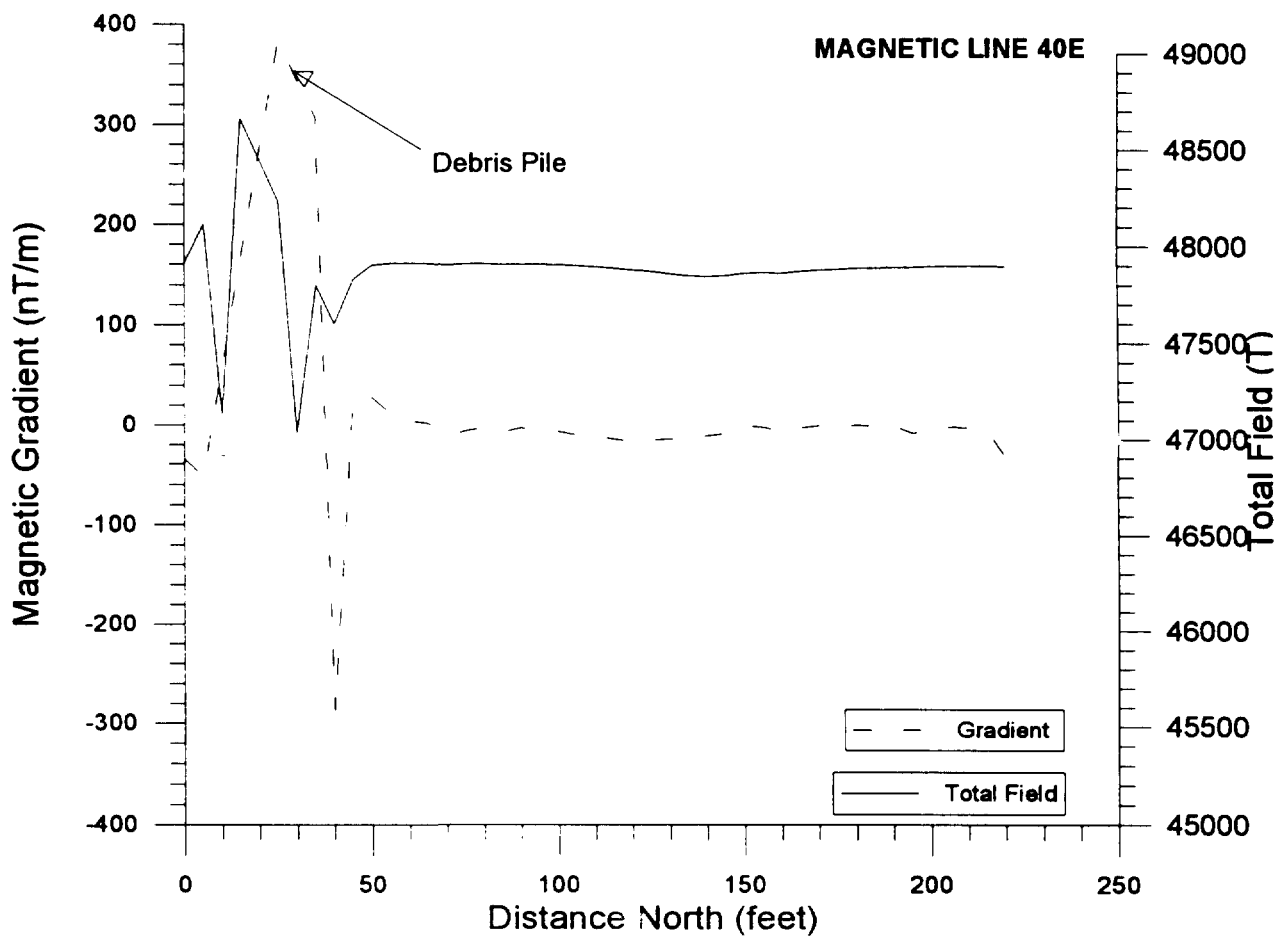
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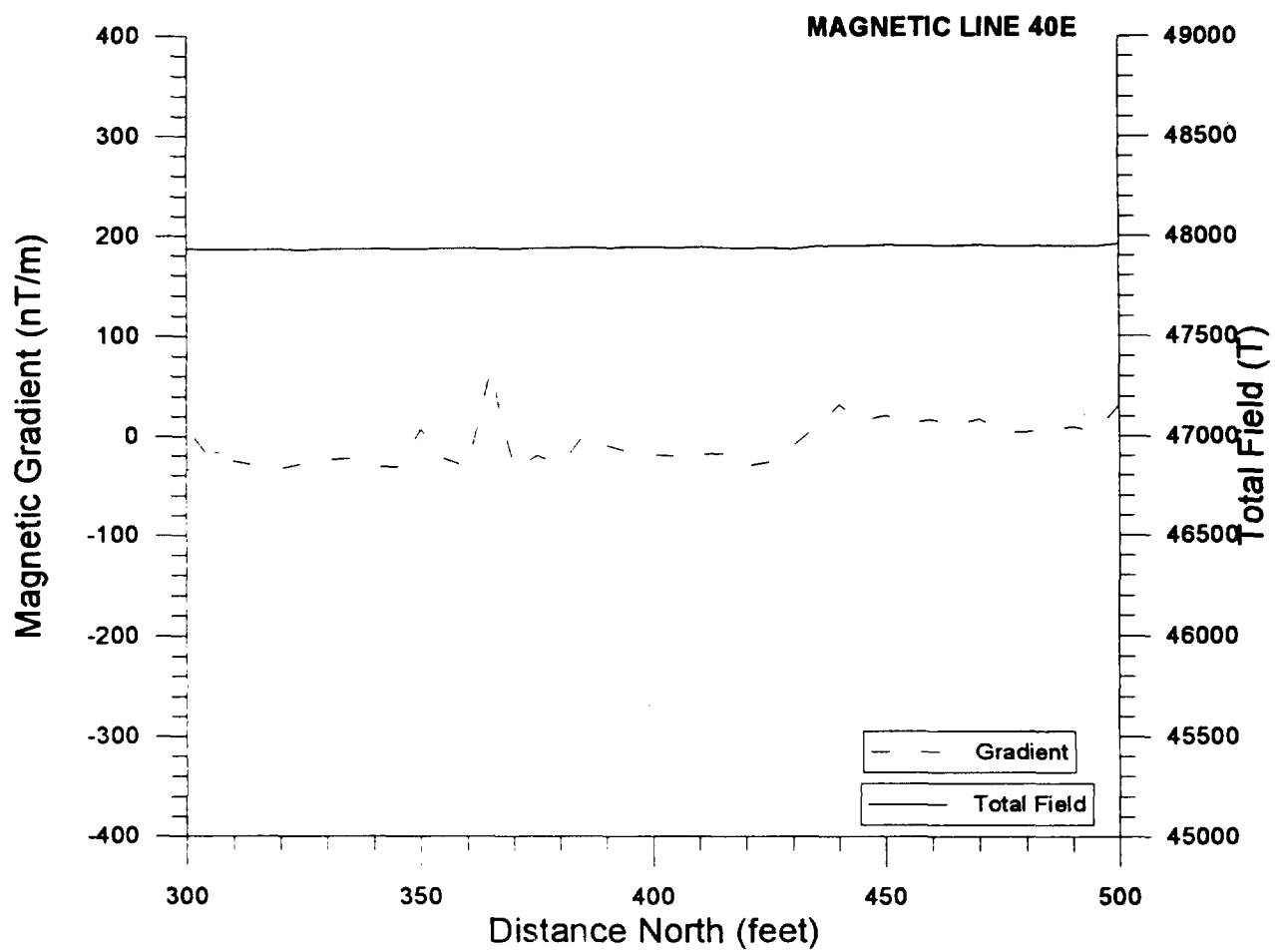


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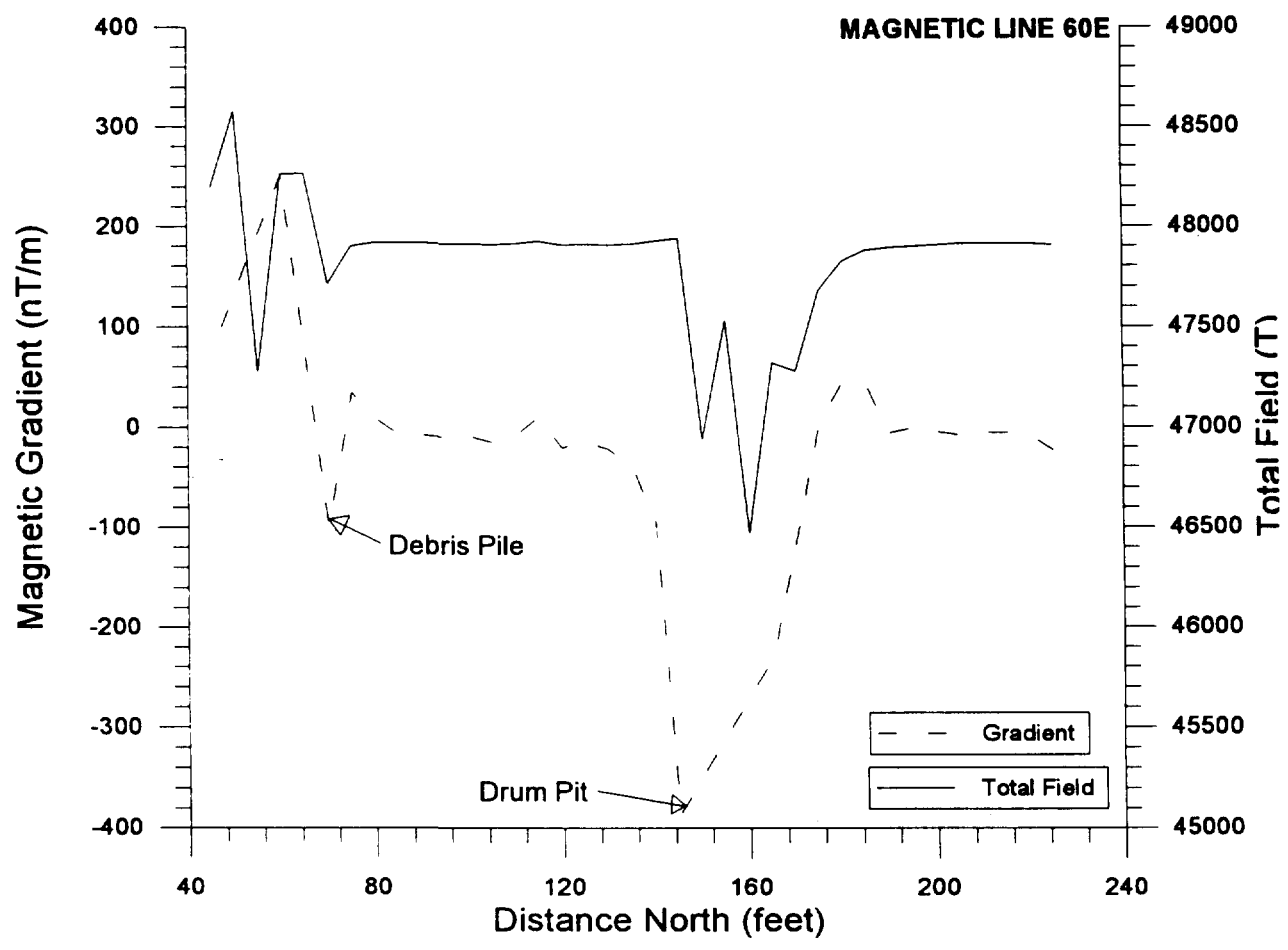


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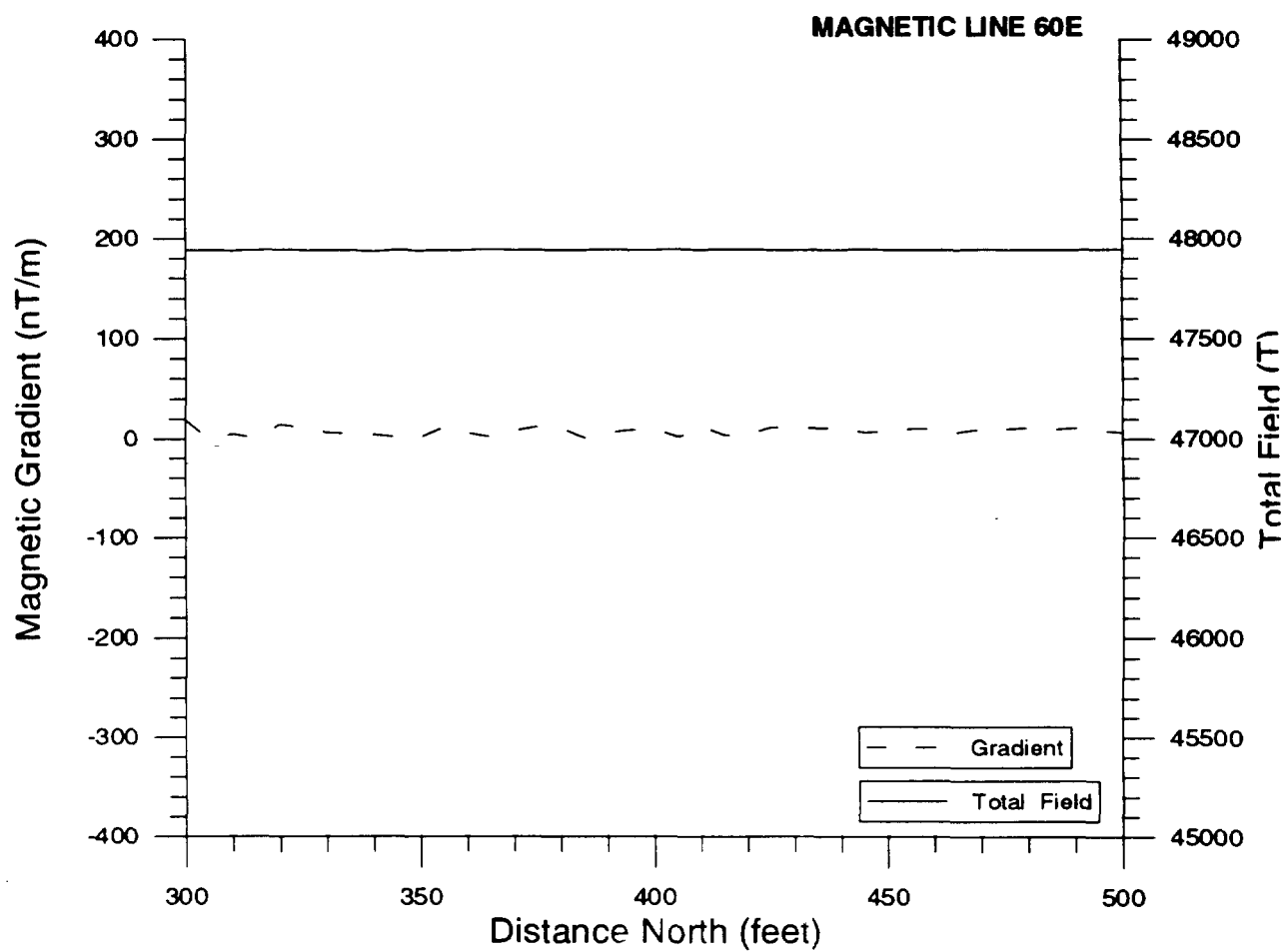




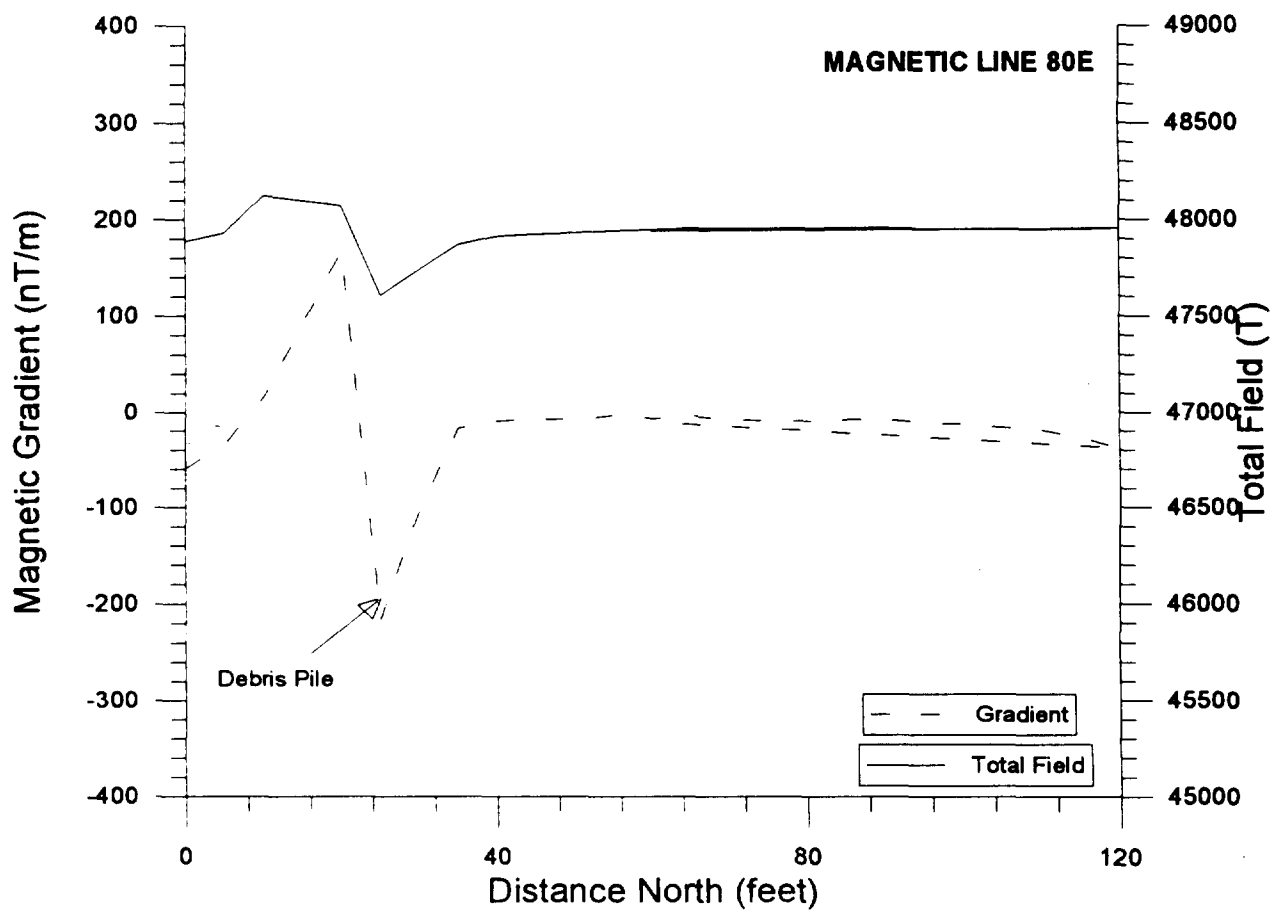
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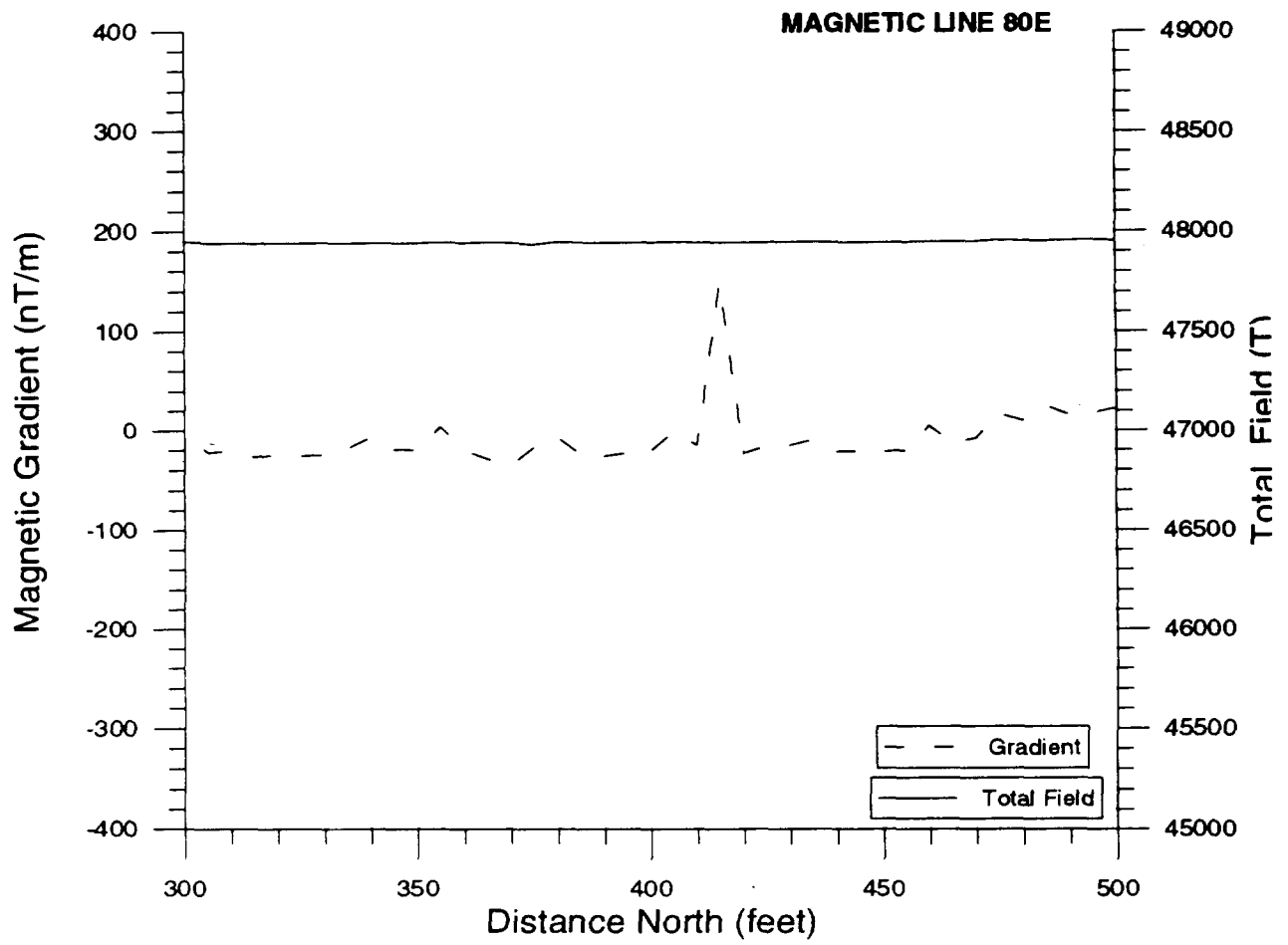
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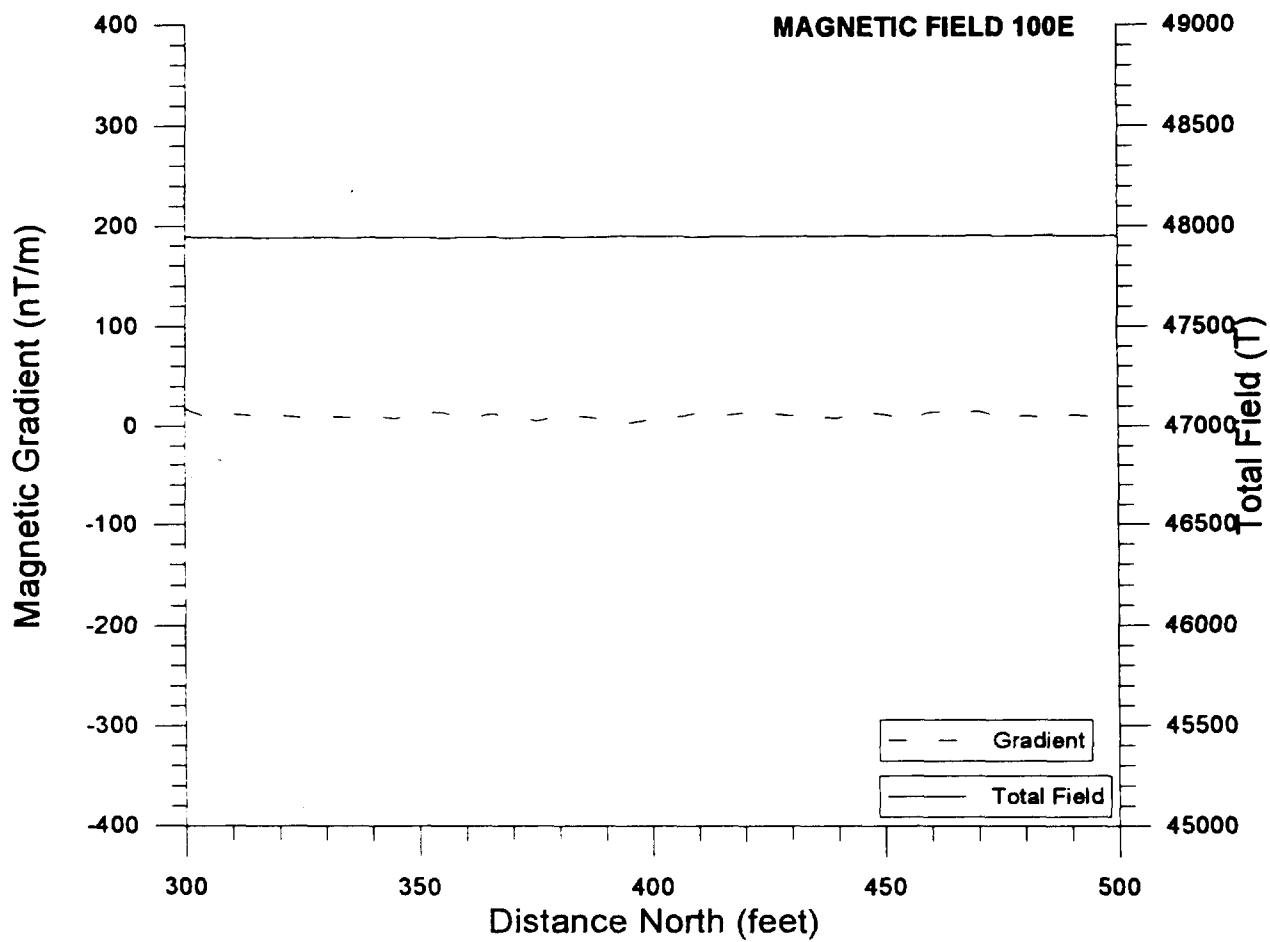
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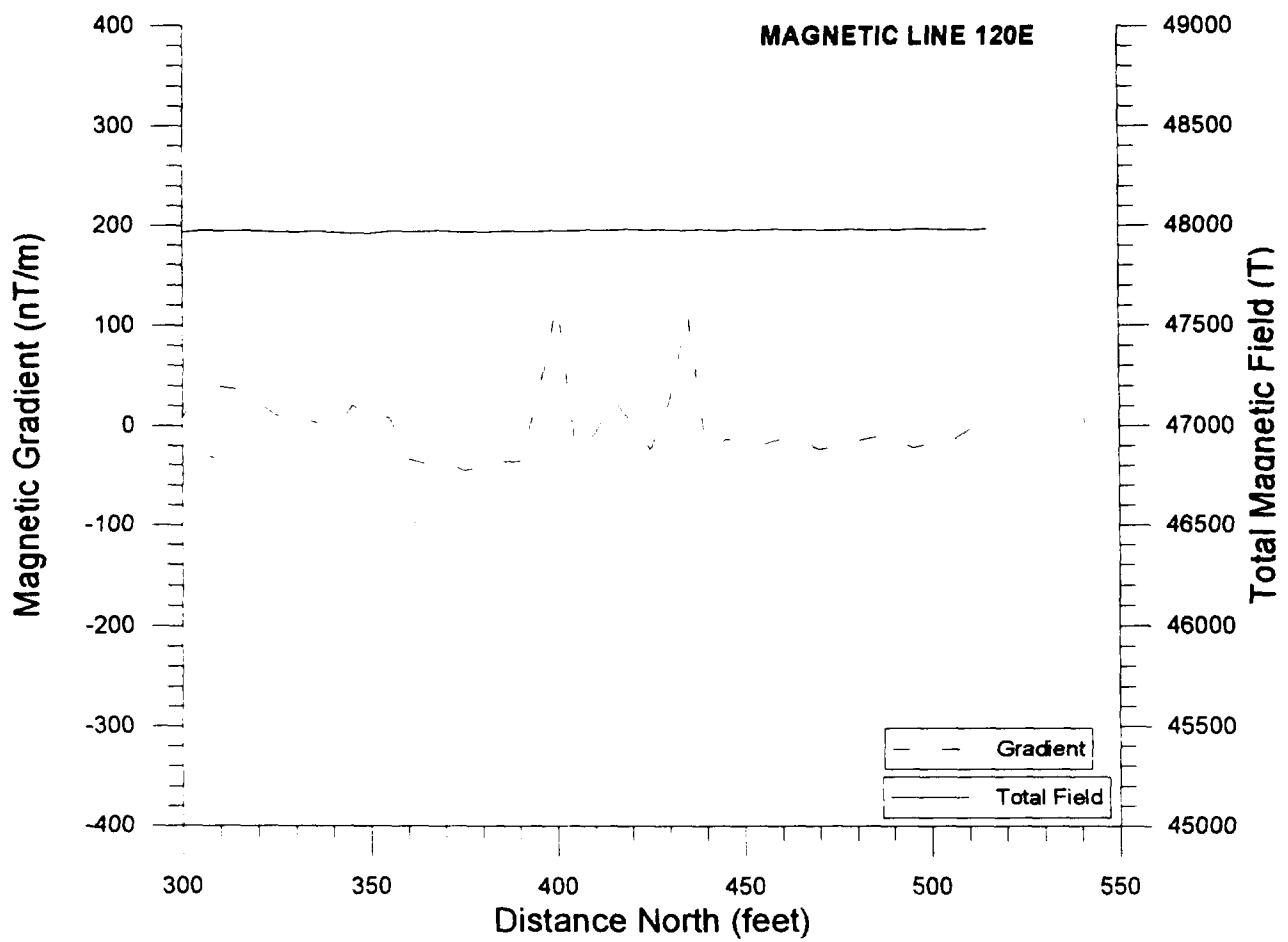
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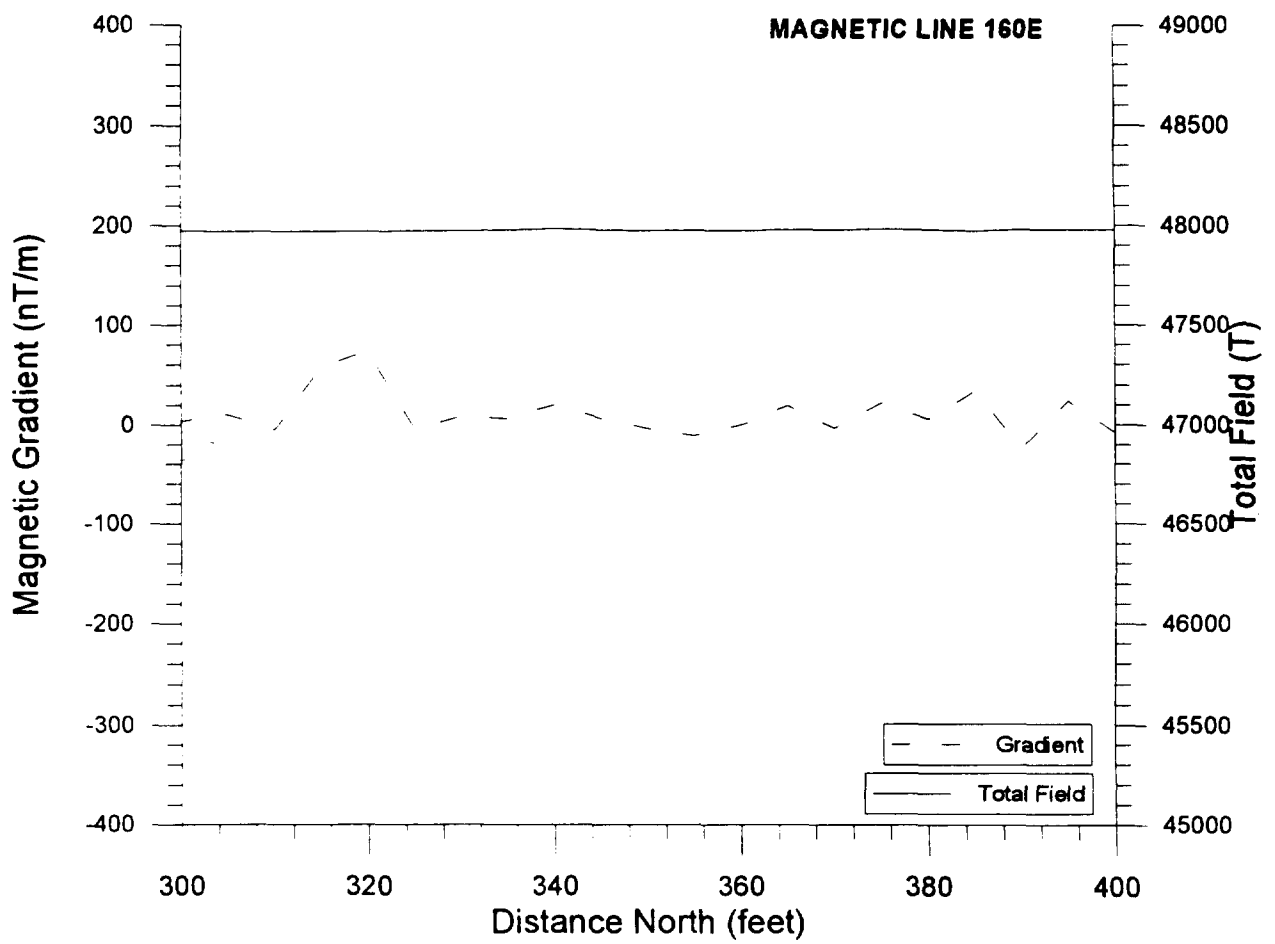
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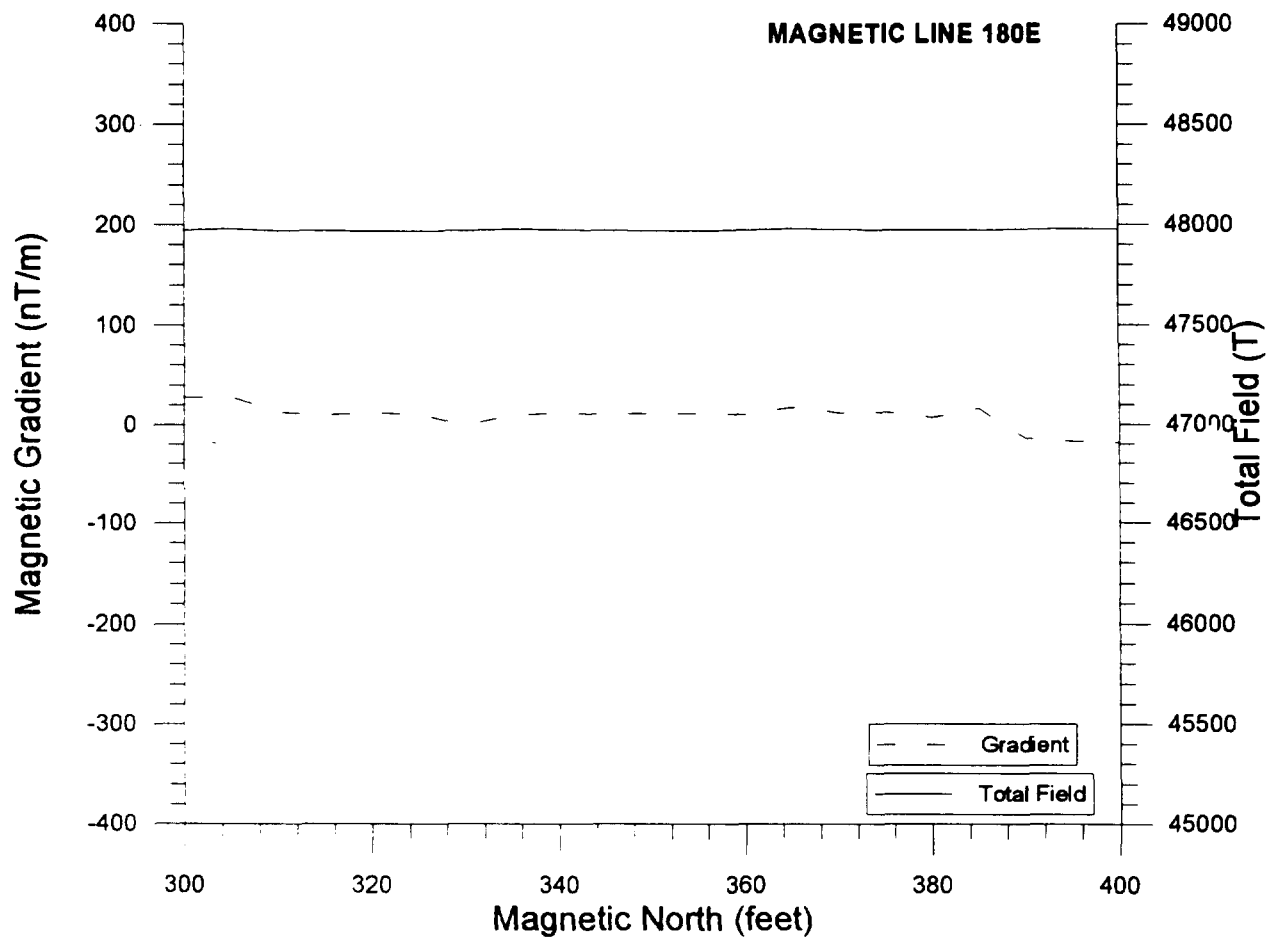
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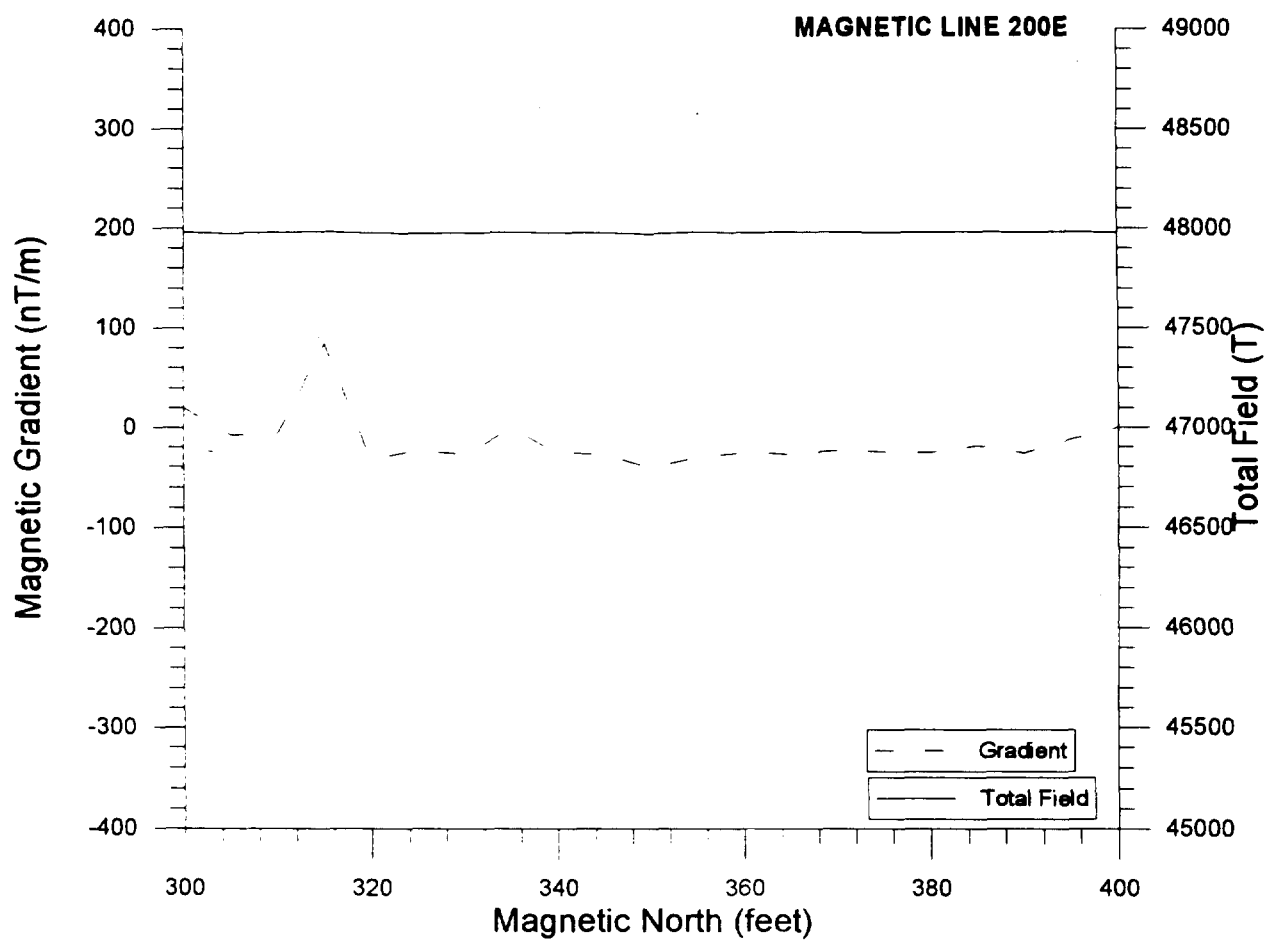
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2 2 3252



2 1 1250



Appendix D

APPENDIX D

**Final Analytical Report
Pier Drum Site
Bradenton, FL
January 1995**

Appendix Contents:

**Analytical Procedures and Results
Quality Assurance/Quality Control
Chain of Custody Communications**



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2 1 0263

DATE: March 21, 1995

TO: R. Singhvi EPA/ERT

FROM: V. Kansal Analytical Section Leader *Vinod Kansal*

SUBJECT: DOCUMENT TRANSMITTAL UNDER WORK ASSIGNMENT # 0-098

Attached please find the following document prepared under this work assignment:

Pier Drum - Analytical Report

Central File WA # 0-098

(w/attachment)

R. Lewis

Task Leader

G. Armstrong

Data Validation and Report Writing Group Leader

G. Powell

Work Assignment Manager

098\DEL\AR\9503\QAQCPMW



2 2 0261

ANALYTICAL REPORT

Prepared by
Roy F. Weston, Inc.

Pier Drum
Bradenton, FL

March 1995

EPA Work Assignment No. 0-098
WESTON Work Order No. 03347-040-001-0098-01
EPA Contract No. 68-C4-0022

Submitted to
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INTRODUCTION

REAC Laboratory, in response to WA # 0-098, provided analytical support for water, soil, drum solid and drum liquid samples collected from the Pier Drum Site in Bradenton, FL. This support included the analysis of water, soil and drum liquid samples as described in the following table. The support also included the subcontracted analysis of drum solid and drum liquid samples, QA/QC, data review, and preparation of an analytical report containing a summary of the analytical methods, the results, and the QA/QC results.

The samples were treated with procedures consistent with those described in SOP # 1008 and are summarized in the following table:

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
00065	3	1/10/95	1/30/95	Drum Liquid	VOA, BNA, Pest/PCB, Metals	REAC
00066	3	1/10/95	1/30/95	Drum Solid	TCLP VOA, TCLP BNA, TCLP Pest/PCB, TCLP Metals	Analab
00066	3	1/10/95	1/30/95	Drum Liquid	%Cl, Moisture, BTU, Ash, %S	Wastex
03663	1	1/11/95	1/13/95	Water	BNA Pest/PCB, TAL Metals	REAC
03663	2	1/11/95	1/13/95	Water	VOA	REAC
03664	3	1/11/95	1/13/95	Soil	TCLP VOA	Analab
03670	3	1/11/95	1/13/95	Water	VOA, BNA, Pest/PCB, TAL Metals	REAC

** COC # denotes Chain of Custody number

The sample table is continued on the next page

Sample Table (Cont)

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
03671	2	1/11/95	1/13/95	Water	VOA, BNA, Pest/PCB, TAL Metals	REAC
03672	2	1/11/95	1/13/95	Water	VOA, BNA, Pest/PCB, TAL Metals	REAC
03672	3	1/11/95	1/13/95	Soil	VOA, BNA, Pest/PCB, TAL Metals	REAC
10027	3	1/18/95	1/18/95	Soil	TCLP Metals, TCLP BNA, TCLP Pest/PCB	REAC

** COC # denotes Chain of Custody number

CASE NARRATIVE

VOA Package E 32

These samples are drum liquids and the holding time criterion does not apply. The analysis was conducted to determine the means of disposal of the drum contents.

VOA Package E 23

The continuing calibration run on 1/13/95 exceeds the 25% difference requirement for acetone (46.24%) and 2-hexanone (27.32%). These analytes were not detected in the samples run under this calibration; the data are not affected.

The continuing calibration run on 1/14/95 exceeds the 25% difference requirement for acetone (29.70%). This analyte was not detected in the samples run under this calibration; the data are not affected.

The continuing calibration run on 1/17/95 exceeds the 25% difference requirement for acetone (52.75%). Both detected and non detected values will be considered as estimated for Lab blank - 1/17/95 and sample 00642.

TCLP VOA Package E 47

The method blank analyzed on 1/20/95 contained 2.6 ug/l methylene chloride. None of the associated samples contained methylene chloride. The data are not affected.

The continuing calibration run on 1/20/95 exceeds the 25% difference requirement for chloromethane (35.08%), bromomethane (27.44%), chloroethane (30.66%), acetone (36.90%), 2-butanone (31.26%), bromoform (32.68%), 4-methyl-2-pentanone (34.49%) and 2-hexanone (35.93%). These analytes were not detected in the samples quantitated by this continuing calibration. The data are not affected.

One surrogate percent recovery (1,2-dichloroethane- d_4) exceeds the acceptable QC limits for sample B 00644. All results for this sample should be considered as estimated.

BNA Package E 33

The method blank analyzed on 1/27/95 contained 46 ug/l di-n-butyl phthalate, 5 ug/l butyl benzyl phthalate and 11 ug/l bis(2-ethylhexyl)phthalate. The positive results of less than 230 ug/l di-n-butyl phthalate, 25 ug/l butyl benzyl phthalate and 55 ug/l bis(2-ethylhexyl)phthalate in samples B 00525, B 00526 and B 00527 are considered to be non-detected.

The method blank analyzed on 1/30/95 contained 2 ug/l di-n-butyl phthalate and 1 ug/l bis(2-ethylhexyl)phthalate. The positive results of less than 10 ug/l di-n-butyl phthalate and 5 ug/l bis(2-ethylhexyl)phthalate in samples CD 00636, CD 00638, CD 00635, CD 00640 and CD 00634 are considered to be non-detected.

The method blank analyzed on 1/31/95 contained 2400 ug/kg di-n-butyl phthalate, 150 ug/kg butyl benzyl phthalate and 620 ug/kg bis(2-ethylhexyl)phthalate. The positive results of less than 12000 ug/kg di-n-butyl phthalate, 750 ug/kg butyl benzyl phthalate and 3100 ug/kg bis(2-ethylhexyl)phthalate in samples A 00642, A 00643 and A 00644 are considered to be non-detected.

The initial calibration run on 11/4/94 exceeds the acceptable QC limits for diethyl phthalate (31.079%). Since no samples were quantitated by this initial calibration, the data are not affected.

The continuing calibration run on 1/27/95 exceeds the acceptable QC limits for hexachlorobenzene (26.92%). Since this analyte was not detected in any of the samples, the data are not affected.

The continuing calibration run on 1/30/95 exceeds the acceptable QC limits for hexachlorobutadiene (26.99%) and hexachloropentadiene (34.84%). Since these analytes were not detected in any of the samples, the data are not affected.

The continuing calibration run on 1/31/95 exceeds the acceptable QC limits for hexachlorobutadiene (34.48%). Since this analyte was not detected in any of the samples, the data are not affected.

The continuing calibration run on 2/1/95 exceeds the acceptable QC limits for hexachlorobutadiene (38.75%). Since this analyte was not detected in any of the samples, the data are not affected.

Two base/neutral surrogate recoveries exceed the acceptable QC limits for nitrobenzene-d₅ (27%) and 2-fluorobiphenyl (30%) for WBLK 011895. The positive base/neutral results detected in this blank should be regarded as estimated.

One acid surrogate recovery exceeds the acceptable QC limits for 2,4,6-tribromophenol (125%) for sample CD 00638. The data are not affected.

For sample BE 00527 one relative percent difference for 1,4-dichlorobenzene (29%) and three spike percent recoveries (MS and MSD for 4-nitrophenol and MSD for pentachlorophenol) exceeded the acceptable QC limits. The data are not affected.

For sample CD 00644 one spike percent recovery (4-nitrophenol) exceeded the acceptable QC limits. The data are not affected.

For sample A 00644 three spike percent recoveries (MS for phenol and 2,4-dinitrotoluene and the MSD for 2,4-dinitrophenol) exceeded the acceptable QC limits. The data are not affected.

BNA Package E 67 (Drum Liquids)

These samples are drum liquids and the holding time criterion is not applicable.

The bottom layer of sample 00913 was diluted and an aliquot was analyzed. Surrogates were not added and an MS/MSD analysis was not performed. The result is included.

The initial calibration run on 11/4/94 exceeds the acceptable QC limits for diethyl phthalate (31.079%). Since no samples were quantitated by this initial calibration, the data are not affected.

The continuing calibration run on 2/8/95 exceeds the acceptable QC limits for hexachlorocyclopentadiene (25.25%). Since this analyte was not detected in any of the samples, the data are not affected.

The continuing calibration run on 2/24/95 exceeds the acceptable QC limits for 1,2-dichlorobenzene (26.28%), 4-methyl phenol (31.58%), hexachloroethane (31.48%), di-n-octyl phthalate (31.43%) and 4-nitroaniline (28.77%). All detected values for sample 00914 should be regarded as estimated.

The continuing calibration run on 2/27/95 exceeds the acceptable QC limits for hexachloroethane (25.51%), hexachlorobutadiene (25.86%), fluorene (29.24%) and benzo (k) fluoranthene (33.55%). Since these analytes were not detected in any of the samples, the data are not affected.

The surrogates were not recovered for samples 00912 and 00913 due to the large dilutions necessary for the analysis. The data are not affected.

The continuing calibration run on 2/10/95 exceeded the acceptable QC limit for methylene chloride (32.44%), 1,2-dichloroethane-d₄ (39.23), 1,2 dichloroethane (30.59%), 4-methyl-2-pentanone (29.10%) and 2-hexanone (31.82%). Since no samples were quantitated by this calibration, the data are not affected.

One surrogate percent recovery exceeds the acceptable QC limits for blank G 6677. The data are not affected.

BNA TCLP Package E 78 (Drum Solids)

The initial calibration run on 2/7/95 on instrument F exceeds the acceptable QC limits for N-nitrosodimethyl amine (34.35%) and benzidine (65.36%). N-nitrosodimethyl amine was not detected in any of the associated samples and benzidine is no longer a CLP compound. The data are not affected.

The initial calibration run on 2/6/95 on instrument B exceeds the acceptable QC limits for benzoic acid (31.98%) and benzidine (60.96%). The data for benzoic acid should be regarded as estimated; benzidine is no longer a CLP compound.

The continuing calibration check standard run on 2/9/95 on instrument F exceeds the acceptable QC limits for 2,4,6-tribromophenol (45.20%), pyrene (28.12%), butyl benzyl phthalate (52.15%) and bis (2-ethylhexyl) phthalate (45.52%). The positive results and non-detected values for bis (2-ethylhexyl) phthalate should be regarded as estimated. The non detected values for butyl benzyl phthalate should also be regarded as estimated. The data for 2,4,6-tribromophenol and pyrene are not affected.

The continuing calibration check standard run on 2/11/95 on instrument F failed. Pentachlorophenol, a calibration check compound, exceeded the acceptable QC limit (36.48%). Since this standard was run for the blank and QA/QC samples only, an exception will be made. Positive results will not be qualified; however, undetected values reported in the blank will be considered as estimated for the following compounds because the percent difference was greater than 50: benzoic acid (70.43%), 2,4-dinitrophenol (52.01%), 4,6-dinitro-2-methyl phenol (59.87%) and butyl benzyl phthalate (60.09%).

The continuing calibration check standard run on 2/14/95 on instrument B was used to quantitate sample 00911 (DL) and 00916 (DL) for benzyl alcohol and benzoic acid. The percent differences for these analytes exceed the QC limits, 28.59% and 32.35%, respectively. The positive results for these compounds should be regarded as estimated only if the dilution values are used.

The result for benzoic acid in sample 00916 should be regarded as estimated because the concentration found in the diluted sample exceeds the highest linear standard.

The internal standard, perylene-d₁₂, is less than 50% of the area for perylene-d₁₂ in the associated continuing calibration check standard. Because the sample is a QA sample, the data are not affected.

The surrogate, 2-fluorobiphenyl was either not found or below the acceptable QC limit in samples 00911, 00916, 00915 MS and 00915 MSD due to coeluting interferences. The associated data are not affected.

The matrix spike percent recovery for 1,2,4-trichlorobenzene exceeds the acceptable QC limit. The associated data are not affected.

The relative percent differences for 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, 4-nitrophenol and 2,4-dinitrotoluene in the MS/MSD analysis exceeded the acceptable QC limits. The associated sample data are not affected.

Pesticide/PCB TCLP Package E 78 (Drum Solids)

The holding time was exceeded for all samples, however, as the holding time criterion does not apply to drum solids, the data are not affected.

Because the samples had been diluted, the surrogate, dibutyl chlorodate, was not recovered for samples 00911 10x and 00915 10x. Since these samples were used for confirmation purposes, the data are not affected.

The percent recoveries for lindane exceeded the acceptable QC limits for samples 00911 MS and 00911 MSD. The percent recoveries for heptachlor and endrin exceeded the acceptable QC limits for sample 00911 MS. The percent recoveries for dieldrin and 4,4'-DDT exceeded the acceptable QC limits for sample 00911 MSD. The data are not affected.

The MS/MSD results are not usable because of the high relative percent differences (44-124) obtained in the analysis.

Metals Package E 56

Mercury and matrix spike/matrix spike duplicate samples were not analyzed due to insufficient sample size.

At the time of collection, preservative was not added to the samples to be analyzed for metals.

SUMMARY of ABBREVIATIONS

B	The analyte was found in the blank		
BFB	Bromofluorobenzene		
BPQL	Below the Practical Quantitation Limit		
C	Centigrade		
D	(Surrogate Table) this value is from a diluted sample and was not calculated (Result Table) this result was obtained from a diluted sample		
CLP	Contract Laboratory Protocol		
COC	Chain of Custody		
CONC	Concentration		
CRDL	Contract Required Detection Limit		
DFTPP	Decafluorotriphenylphosphine		
DL	Detection Limit		
E	The value is greater than the highest linear standard and is estimated		
EMPC	Estimated maximum possible concentration		
J	The value is below the method detection limit and is estimated		
HHL	High Hazard Laboratory, Brunswick, GA		
IDL	Instrument Detection Limit		
ISTD	Internal Standard		
MDL	Method Detection Limit		
SQL	Method Quantitation Limit		
MI	Matrix Interference		
MS	Matrix spike		
MSD	Matrix spike duplicate		
MW	Molecular weight		
NA	either Not Applicable or Not Available		
NC	Not Calculated		
ND	Not Detected		
NR	Not Requested		
NS	Not Spiked		
% D	Percent difference		
% REC	Percent Recovery		
PQL	Practical quantitation limit		
PPBV	Parts per billion by volume		
QL	Quantitation Limit		
RPD	Relative percent difference		
RSD	Relative Standard Deviation		
SIM	Selected Ion Mode		
m ³	cubic meter	kg	kilogram
l(L)	liter	g	gram
dl	deciliter	cg	centigram
ml	milliliter	mg	milligram
ul	microliter	ug	microgram
		ng	nanogram
		pg	picogram

* denotes a value that exceeds the acceptable QC limit

Abbreviations that are specific to a particular table are explained in footnotes on that table

Revision 11/17/94

Analytical Procedure for VOA in Water and Drum Liquids

A modified 524.2 method was used for the analysis of Volatile Organic Compounds in water and drum liquids. Samples were purged, trapped, and desorbed to a GC/MS system. Prior to purging, the samples were spiked with a three component surrogate mixture consisting of toluene-d₈, 4-bromofluorobenzene and 1,2-dichloroethane-d₄ and a three component internal standard mixture consisting of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d₅. The following conditions and parameters were utilized:

1) Purge and Trap Unit: A Tekmar concentrator (LSC 2000) equipped with an autosampler (ALS2016) was utilized.

Purge and Trap parameters:

Purge	10 min at 25° C	Dry Purge	2 min at 25° C
Desorb	4 min at 250° C	Desorb Preheat	245° C
Purge Flow Rate	40 ml/min	Bake	8 min at 260° C

Trap - VOCARB 4000 (Supelco) which consists of four adsorbent beds: Carbopack B (graphitized carbon 60/80 mesh), Carbopack C (graphitized carbon 60/80 mesh), Carboxen-1000 (60/80 mesh), and Carboxen-1001 (60/80 mesh).

2) GC/MS System: A Hewlett Packard 5970 GC/MSD equipped with an RTE-A data system was used.

GC/MS parameters:

GC Column: 30 meter x 0.53mm ID, RTx-Volatiles (Restek Corp.) column with 3.0 um thickness.

GC Temperature	5 min at 10° C;	6° C/min to 140° C
Program	0.1 min at 140° C;	12° C/min to 160° C
	5 min at 160° C	

GC Flow Rate Helium at 10 ml/min

GC/MS Interface - Glass jet separator with 30 ml/min helium make-up gas at 250° C.

Mass Spectrometer - Electron Impact Ionization at a nominal electron energy of 70 electron volts, scanning from 35-300 amu at one scan/sec.

Computer - Preprogrammed to plot Extracted Ion Current Profile (EICP); capable of integrating ions and plotting abundances vs time or scan number. A library search (NBS-Wiley) for tentatively identified compounds was performed on samples.

The GC/MS system was calibrated using 6 VOA standards at 5, 20, 50, 100, 150, and 200 ug/l. Before analysis each day, the system was tuned with 50 ng BFB and passed a continuing calibration check when analyzing a 50 ug/l standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve.

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The results for water are listed in Table 1.1 and the Tentatively Identified Compounds for water are listed in Table 1.2. The results for drum liquids are listed in Table 1.6 and the Tentatively Identified Compounds for drum liquids are listed in Table 1.7.

The concentrations of the analytes were calculated using the following equation:

$$C_u = \frac{A_x \times I_{is}}{A_{is} \times RF \text{ (or } RF_{ave}) \times V_o}$$

where

C_u = concentration of the target analyte (ug/L)
 A_x = Area of the target analyte
 I_{is} = ng of specific internal standard
 A_{is} = Area of the specific internal standard
 RF = Response Factor
 RF_{ave} = average Response Factor
 V_o = volume of sample purged (ml), taking into account dilutions

The average Response Factor is used when a sample is associated with an initial calibration curve. The Response Factor is used when a sample is associated with a continuing calibration curve.

Response Factor calculation:

The response factor (RF) for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where,

RF = Response factor for a specific analyte
 A_c = Area of the analyte in the standard
 I_{is} = Mass of the specific internal standard
 A_{is} = Area of the specific internal standard
 I_c = Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

where

n = number of Samples

Revision of 6/28/94

Analytical Procedure for VOA in Soil

A modified 524.2 method was used for the analysis of Volatile Organic Compounds in soil. Samples were purged, trapped, and desorbed to a GC/MS system. Prior to purging, the samples were spiked with a three component surrogate mixture consisting of toluene- d_8 , 4-bromofluorobenzene and 1,2-dichloroethane- d_4 , and a three component internal standard mixture consisting of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene- d_5 . The following conditions and parameters were utilized:

1) Purge and Trap Unit: A Tekmar concentrator (LSC 2000) equipped with an autosampler (ALS2016) was utilized.

Purge and Trap parameters:

Purge	10 min at 25° C	Dry Purge	2 min at 25° C
Desorb	4 min at 250° C	Desorb Preheat	245° C
Purge Flow Rate	40 ml/min	Bake	8 min at 260° C

Trap - VOCARB 4000 (Supelco) which consists of four adsorbent beds: Carboxen-1000 (60/80 mesh), Carboxen-1001 (60/80 mesh), Carbopack B (graphitized carbon 60/80 mesh), and Carbopack C (graphitized carbon 60/80 mesh).

2) GC/MS System: A Hewlett Packard 5970 GC/MSD equipped with an RTE-A data system was used.

GC Column: 30 meter x 0.53mm ID, RTX - Volatiles (Restek Corp.) column with 3um thickness.

GC Temperature Program:	5 min at 10° C;	6° C/min to 140° C
	0.1 min at 140° C;	12° C/min to 160° C
	5 min at 160° C	

GC Flow Rate: Helium at 10 ml/min

GC/MS Interface: Glass jet separator with 30 ml make-up gas at 250° C.

Mass Spectrometer: Electron Impact Ionization at a nominal electron energy of 70 electron volts, scanning from 35-300 amu at one scan/sec.

Computer - Preprogrammed to plot Extracted Ion Current Profile (EICP); capable of integrating ions and plotting abundances vs time or scan number. A library search (NBS-Wiley) for tentatively identified compounds was performed on samples.

The GC/MS system was calibrated using 6 VOA standards at 5, 20, 50, 100, 150, and 200 ug/l. Before analysis each day, the system was tuned with 50 ng BFB and passed a continuing calibration check when analyzing a 50 ug/l standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve.

The medium level soil extracts were analyzed by extracting 5.0 g soil with 5 ml methanol, diluting an aliquot with 5 ml water and analyzing the solution by the purge and trap method. The results are in Table 1.3; the tentatively identified compounds are listed in Table 1.4. The concentrations of the analytes were calculated using the following equation:

$$C_u = \frac{DF \times A_t \times I_{is}}{A_s \times RF \text{ (or } RF_{ave}) \times W_s \times D}$$

where

C_u	= Concentration of target analyte (ug/kg) on a dry weight basis
DF	= Dilution Factor
A_t	= Area of the target analyte
I_{is}	= mass of specific internal standard (ng)
A_s	= Area of the specific internal standard
RF	= Response Factor
RF_{ave}	= average Response Factor
W_s	= Weight of sample (g)
D	= Decimal percent solids

The average Response Factor is used when a sample is associated with an initial calibration curve. The Response Factor is used when a sample is associated with a continuing calibration curve.

Response Factor calculation:

The response factor (RF) for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where,

RF	= Response factor for a specific analyte
A_c	= Area of the analyte in the standard
I_{is}	= Mass of the specific internal standard
A_{is}	= Area of the specific internal standard
I_c	= Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

and

n = number of Samples

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Analytical Procedure for TCLP VOA

The subcontract laboratory determined the concentration of VOA compounds in the TCLP leachate by preparing the samples according to Method 1311 and analyzing the leachates according to Method 8240A. Both methods are given in "Test Methods for Evaluating Solid Wastes, Physical and Chemical Methods: 3rd Edition, USEPA SW846, 1986, Final Update I, July 1992". The results of the analysis for the sediment samples are listed in Table 1.5. The results of the analysis for the drum solid samples are listed in Table 1.8.

Analytical Procedure for BNA in Water, TCLP Extracts and Drum Liquids

Extraction Procedure

Prior to extraction, each sample was spiked with a six component surrogate mixture consisting of nitrobenzene-d₅, 2-fluorobiphenyl, terphenyl-d₁₄, phenol-d₅, 2-fluorophenol, and 2,4,6-tribromophenol. One liter of sample was extracted according to Method 625, Section 10, as outlined in the Federal Register Vol. 49, #209, Friday, Oct. 26, 1984. The extracts were combined, concentrated to 1.0 ml, an internal standards mixture consisting of 1,4-dichlorobenzene-d₄, naphthalene-d₈, acenaphthene-d₁₀, phenanthrene-d₁₀, chrysene-d₁₂, and perylene-d₁₂ was added, and analyzed.

Analytical Procedure

An HP 5995C Gas Chromatograph/Mass Spectrometer (GC/MS), equipped with a 7673A autosampler and controlled by an HP-1000 RTE-6/VM computer was used to analyze the samples.

The instrument conditions were:

Column	Restek Rtx-5 (crossbonded SE-54) 30 meter x 0.32mm ID, 0.50 μ m film thickness
Injection Temperature	290° C
Transfer Temperature	290° C
Source Temperature	240° C
Analyzer Temperature	240° C
Temperature Program	40°C for 3 min 8° C/min to 295° C hold for 12 min
Splitless Injection	Split time = 1.00 min
Injection Volume	1 μ l

The GC/MS system was calibrated using 5 BNA standards at 20, 50, 80, 120, and 160 μ g/ml. Before analysis each day, the system was tuned with 50 ng decafluorotriphenylphosphine (DFTPP) and passed a continuing calibration check when analysing a 50 μ g/ml standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve.

The BNA results for the water samples are listed in Table 1.9; the tentatively identified compounds are listed in Table 1.10. The BNA results for the TCLP extracts are listed in Table 1.13; the tentatively identified compounds are listed in Table 1.14. The BNA results for the drum liquids are listed in Table 1.15; the tentatively identified compounds are listed in Table 1.16. The concentration of the detected compounds was calculated using the following equation:

$$C_u = \frac{DF \times A_u \times I_{is} \times V_i}{A_{is} \times RF \text{ (or } RF_{ave}) \times V_i \times V_o}$$

where

C_u	=	Concentration of target analyte ($\mu\text{g/L}$)
DF	=	Dilution Factor
A_u	=	Area of target analyte
I_{is}	=	Mass of specific internal standard (ng)
V_i	=	Volume of extract (μl)
A_{is}	=	Area of specific internal standard
RF	=	Response Factor (unitless)
RF_{ave}	=	average Response Factor
V_i	=	Volume of extract injected (μl)
V_o	=	Volume of sample (ml)

The RF_{ave} is used when a sample is associated with an initial calibration curve. The RF is used when a sample is associated with a continuing calibration curve.

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where

RF	=	Response factor for a specific analyte
A_c	=	Area of the analyte in the standard
I_{is}	=	Mass of the specific internal standard
A_{is}	=	Area of the specific internal standard
I_c	=	Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

and

n = number of Samples

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Analytical Procedure for BNA in Soil

Extraction Procedure

Prior to extraction each sample was spiked with a six component surrogate mixture consisting of nitrobenzene-d₅, 2-fluorobiphenyl, terphenyl-d₁₄, phenol-d₅, 2-fluorophenol, and 2,4,6-tribromophenol. Thirty grams of sample was mixed with 30 g anhydrous sodium sulfate, and Soxhlet extracted for 16 hours with 300 ml of 1:1 acetone:methylene chloride. The extract was concentrated to 1.0 ml., an internal standard mixture consisting of 1,4-dichlorobenzene-d₄, naphthalene-d₈, acenaphthene-d₁₀, phenanthrene-d₁₀, chrysene-d₁₂, and perylene-d₁₂ was added, and analyzed.

Analysis Procedure

An HP 5995C Gas Chromatograph/Mass Spectrometer (GC/MS), equipped with a 7673A autosampler and controlled by an HP-1000 RTE-6/VM computer was used to analyze the samples.

The instrument conditions were:

Column	Restek Rtx-5 (crossbonded SE-54) 30 meter x 0.32mm ID, 0.50 µm film thickness
Injection Temperature	290° C
Transfer Temperature	290° C
Source Temperature	240° C
Analyzer Temperature	240° C
Temperature Program	40°C for 3 min 8° C/min to 295° C hold for 12 min
Splitless Injection	Split time = 1.00 min
Injection Volume	1 µl

The GC/MS system was calibrated using 5 BNA standard mixtures at 20, 50, 80, 120, and 160 µg/ml. Before analysis each day, the system was tuned with 50 ng decafluorotriphenylphosphine (DFTPP) passed a continuing calibration check when analyzing a 50 µg/ml standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve.

The BNA results, based on dry weight, are listed in Table 1.11; the tentatively identified compounds are listed in Table 1.12. The concentration of the detected compounds was calculated using the following equation:

$$C_u = \frac{DF \times A_u \times I_{is} \times V_i}{A_{is} \times RF(\text{ or } RF_{ave}) \times V_i \times W \times D}$$

where

C_u	=	Concentration of target analyte ($\mu\text{g/Kg}$)
DF	=	Dilution Factor
A_u	=	Area of target analyte
I_{is}	=	Mass of specific internal standard (ng)
V_i	=	Volume of extract (μl)
A_{is}	=	Area of specific internal standard
RF	=	Response Factor (unitless)
RF_{ave}	=	average Response Factor
V_i	=	Volume of extract injected (μl)
W	=	Weight of sample (g)
D	=	Decimal per cent solids

The RF_{ave} is used when a sample is associated with an initial calibration curve. The RF is used when a sample is associated with a continuing calibration.

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where

RF	=	Response factor for a specific analyte
A_c	=	Area of the analyte in the standard
I_{is}	=	Mass of the specific internal standard
A_{is}	=	Area of the specific internal standard
I_c	=	Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

and

n = number of Samples

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Analytical Procedure for TCLP BNA

The subcontract laboratory determined the concentration of BNA compounds in the TCLP leachate by preparing the samples according to Method 1311 and analyzing the leachates according to Method 8270. Both methods are given in "Test Methods for Evaluating Solid Wastes, Physical and Chemical Methods: 3rd Edition, USEPA SW846, 1986, Final Update 1, July 1992". The results of the analysis for the drum solid samples are listed in Table 1.17.

Analytical Procedure for Pesticides and PCBs in Water

Extraction Procedure

One liter of sample was spiked with a surrogate solution consisting of tetrachloro-m-xylene and decachlorobiphenyl, and was extracted three times with 60 ml portions of methylene chloride. The combined extracts were filtered, concentrated to 10 ml, solvent exchanged with 60 ml hexane, and the hexane concentrated to 1.0 ml.

Gas Chromatographic Analysis

The extract was analyzed for pesticides using simultaneous dual column injections. The analysis was done on an HP 5890 GC/ECD system, equipped with an HP 7673A automatic sampler, and controlled with an HP-ChemStation. The following conditions were employed:

First Column	DB-608, 30 meter, 0.53mm fused silica capillary, 0.83 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150°C for 1 minute 7°C/min to 265°C 18 min at 265°
Second Column	Rtx-1701, 30 meter, 0.53mm fused silica capillary, 0.50 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150° C for 1 minute 7°C/min to 265°C 18 min at 265°

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500 μ g/L. The response from each mixture were used to calculate the response factors (RF) of each analyte. The average RF was used to calculate the concentrations of the pesticides in the samples. Quantification was based on the DB-608 column (signal 1), and identity of the analyte was confirmed using the Rtx-1701 column (signal 2). A fingerprint gas chromatogram was run using each of the seven Aroclor mixtures, and toxaphene; calibration curves were run only if a particular Aroclor, or toxaphene was found in the sample.

The Pesticide/PCB results, listed in Table 1.18, were calculated from the following formula:

$$C_u = \frac{DF \times A_u \times V_i}{RF_{ave} \times V_i \times V_s}$$

where

C_u = Concentration of analyte ($\mu\text{g/L}$)
 DF = Dilution Factor
 A_u = Area or peak height
 V_i = Volume of sample (ml)
 RF_{ave} = Average response factor
 V_i = Volume of extract injected (μl)
 V_s = Sample volume (ml)

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_u}{\text{total pg injected}}$$

where

A_u = Area or peak height

and

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

where

n = number of samples

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Analytical Procedure for Pesticides and PCBs in Soil

Extraction Procedure

Thirty grams of sample was spiked with a surrogate solution consisting of tetrachloro-m-xylene and decachlorobiphenyl, 30 g anhydrous sodium sulfate and Soxhlet extracted with 16 hours with 300 ml 1:1 hexane: acetone. The extract was concentrated to 5.0 ml.

Gas Chromatographic Analysis

The extract was analyzed for pesticides and PCBs using simultaneous dual column injections. The analysis was done on an HP 5890 GC/ECD system, equipped with an HP 7673A automatic sampler, and controlled with an HP-CHEM STATION. The following conditions were employed:

First Column	DB-608, 30 meter, 0.53mm fused silica capillary, 0.83 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150°C for 1 minute 7°C/min to 265°C 18 min at 265°
Second Column	Rtx-1701, 30 meter, 0.53mm fused silica capillary, 0.50 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150° C for 1 minute 17°C/min to 265°C 18 min at 265°

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500 μ g/L. The results from each mixture were used to calculate the response factor (RF) of each analyte and the average Response Factor was used to calculate the concentration of pesticide in the sample. Quantification was based on the DB-608 column (signal 1) and the identity of the analyte was confirmed using the Rtx-1701 column (signal 2). A fingerprint chromatogram was run using each of the seven Aroclor mixtures and toxaphene; calibration curves were run only if a particular Aroclor or toxaphene was found in the sample.

The pesticide/PCB results, listed in Table 1.19, are calculated by using the following formula:

$$C_u = \frac{DF \times A_u \times V_i}{RF_{ave} \times V_i \times W \times D}$$

where

C_u	=	Concentration of analyte (mg/Kg)
DF	=	Dilution Factor
A_u	=	Area or peak height
V_i	=	Volume of sample (ml)
RF_{ave}	=	Average response factor
V_i	=	Volume of extract injected (μ l)
W	=	Weight of sample (g)
D	=	Decimal per cent solids

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_u}{\text{total pg injected}}$$

where

A_u = Area or peak height

and

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

where

n = number of samples

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Analytical Procedure for Pesticides and PCBs in Drum Liquids

Extraction Procedure

One hundred and eighty ml of sample was spiked with a surrogate solution consisting of tetrachloro-m-xylene and decachlorobiphenyl, and was extracted three times with 60 ml portions of methylene chloride. The combined extracts were filtered, concentrated to 10 ml, solvent exchanged with 60 ml hexane, and the hexane concentrated to 1.0 ml.

Gas Chromatographic Analysis

The extract was analyzed for pesticides using simultaneous dual column injections. The analysis was done on an HP 5890 GC/ECD system, equipped with an HP 7673A automatic sampler, and controlled with an HP-ChemStation. The following conditions were employed:

First Column	DB-608, 30 meter, 0.53mm fused silica capillary, 0.83 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150°C for 1 minute 7°C/min to 265°C 18 min at 265°
Second Column	Rtx-1701, 30 meter, 0.53mm fused silica capillary, 0.50 μ m film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150° C for 1 minute 7°C/min to 265°C 18 min at 265°

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500 μ g/L. The response from each mixture were used to calculate the response factors (RF) of each analyte. The average RF was used to calculate the concentrations of the pesticides in the samples. Quantification was based on the DB-608 column (signal 1), and identity of the analyte was confirmed using the Rtx-1701 column (signal 2). A fingerprint gas chromatogram was run using each of the seven Aroclor mixtures, and toxaphene; calibration curves were run only if a particular Aroclor, or toxaphene was found in the sample.

The Pesticide/PCB results, listed in Table 1.21, were calculated from the following formula:

$$C_u = \frac{DF \times A_u \times V_i}{RF_{ave} \times V_i \times V_s}$$

where

C_u = Concentration of analyte ($\mu\text{g/L}$)
 DF = Dilution Factor
 A_u = Area or peak height
 V_i = Volume of sample (ml)
 RF_{ave} = Average response factor
 V_i = Volume of extract injected (μl)
 V_s = Sample volume (ml)

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_u}{\text{total pg injected}}$$

where

A_u = Area or peak height

and

$$RF_{ave} = \frac{RF_1 + \dots + RF_n}{n}$$

where

n = number of samples

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Analytical Procedure for TCLP Pesticide/PCBs

The subcontract laboratory determined the concentration of pesticides and PCBs in the TCLP leachate by preparing the samples according to Method 1311 and analyzing the leachates according to Method 8080. Both methods are given in "Test Methods for Evaluating Solid Wastes, Physical and Chemical Methods: 3rd Edition, USEPA SW846, 1986, Final Update I, July 1992". The results of the analysis for the drum solid samples are listed in Table 1.22.

Analytical Procedure for Metals in Water

A 45 ml aliquot of sample was mixed with 5.0 ml concentrated nitric acid, placed in an acid rinsed Teflon container, capped with a Teflon lined cap, and digested according to SW-846, Method 3015, in a CEM MDS-2100 microwave oven (the first stage was at 99% power for 10 minutes and the second stage was at 70% power for 10 minutes). After digestion, the sample was analysed for all metals, except mercury, by USEPA SW-846 Method 7000/6010.

Mercury was analyzed separately on a Varian SpectrAA-300 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyser using modified method 7470 as given by "Test Method for Evaluating Solid Waste, Sept. 1986," USEPA SW-846. Results of the analyses of the water samples are listed in Table 1.23.

Analytical Procedure for Metals in Soil

One gram of sample, weighed to 0.01 g accuracy, was thoroughly mixed with 10 ml 1:1 nitric acid:water, and digested according to SW-846, Method #3050 and analyzed according to Method 7000/6010.

Mercury was analyzed separately on a Varian SpectrAA-20 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyzer using method 7471 as given by "Test Methods for Evaluating Solid Waste", USEPA, SW-846, September, 1986. Results of the analyses are listed in Table 1.24.

Analytical Procedure for TCLP Metals

A 45 ml aliquot of sample was mixed with 5.0 ml concentrated nitric acid, placed in an acid rinsed Teflon container, capped with a Teflon lined cap, and digested according to SW-846, Method 3015, in a CEM MDS-2100 microwave oven (the first stage was at 99% power for 10 minutes and the second stage was at 70% power for 10 minutes). After digestion, the sample was analysed for all metals, except mercury, by USEPA SW-846 Method 7000/6010.

Mercury was analyzed separately on a Varian SpectrAA-300 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyser using modified method 7470 as given by "Test Method for Evaluating Solid Waste, Sept. 1986," USEPA SW-846. Results of the analyses of the TCLP leachates are listed in Table 1.25.

Analytical Procedure for Metals in Drum Liquid Samples

A 25 ml aliquot of sample was allowed to evaporate to dryness on a hot plate, mixed with 5.0 ml concentrated nitric acid, placed in an acid rinsed Teflon container, capped with a Teflon lined cap, and digested according to SW-846, Method 3010. After digestion, the sample was diluted to 50 ml with ASTM Type II water and analysed for all metals by USEPA SW-846 procedures. The metals analyses were done either on a Varian SpectrAA-400Z Atomic Absorption Spectrophotometer or on an Inductively Coupled Argon Plasma (ICAP) emission spectrometer. Results of the analyses of the samples are listed in Table 1.26.

Analytical Procedure for TCLP Metals in Drum Solids

The subcontract laboratory determined the concentration of metals in the TCLP leachate by preparing the samples according to Method 1311 and analyzing the leachates according to Method 7000. Both methods are given in "Test Methods for Evaluating Solid Wastes, Physical and Chemical Methods: 3rd Edition, USEPA SW846, 1986, Final Update I, July 1992". The results of the analysis for the drum solid samples are listed in Table 1.27.

Analytical Procedure for BTU

The subcontract laboratory determined the BTU value of the samples using ASTM Method D-240. The results of the analysis are listed in Table 1.28.

Analytical Procedure for Ash

The subcontract laboratory determined the ash content of the samples using ASTM Method D-482. The results of the analysis are listed in Table 1.28.

Analytical Procedure for Chlorine

The subcontract laboratory determined the chlorine content of the samples using ASTM Method D-808. The results of the analysis are listed in Table 1.28.

Analytical Procedure for Sulfur

The subcontract laboratory determined the sulfur content of the samples using ASTM Method D-129. The results of the analysis are listed in Table 1.28.

Analytical Procedure for Moisture

The subcontract laboratory determined the moisture content of the samples using ASTM Method D-95. The results of the analysis are listed in Table 1.28.

Table 1.1 Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00645	00638
LOCATION :		TRIP BLANK	N PIT
COLLECTED :		01/11/95	01/11/95
ANALYZED :	01/13/95	01/13/95	01/13/95
INJECTED :	14:40	15:40	17:42
FILE # :	^V2426	^V2427	^V2430
DIL. FACT.:	1	1	1
UNIT :	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0	ND	1.0
Acetone	ND	2.0	ND	2.0	ND	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0	ND	1.0
2-Butanone	ND	4.0	ND	4.0	ND	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0	ND	1.0
1,3-Dichloropropane	ND	1.0	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0	ND	2.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00645	00638
LOCATION :		TRIP BLANK	N PIT
COLLECTED :		01/11/95	01/11/95
ANALYZED :	01/13/95	01/13/95	01/13/95
INJECTED :	14:40	15:40	17:42
FILE :	^V2426	^V2427	^V2430
DIL. FACT.:	1	1	1
UNIT :	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	ND	1.0	ND	1.0
2-Hexanone	ND	2.0	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0	ND	1.0
p & m-Xylene	ND	1.0	ND	1.0	ND	1.0
o-Xylene	ND	1.0	ND	1.0	ND	1.0
Styrene	ND	1.0	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0
sec-Butylbenzene	ND	1.0	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0	ND	1.0
Naphthalene	ND	1.0	ND	1.0	ND	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0	ND	1.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00640
 LOCATION : FIELD BLANK
 COLLECTED : 01/11/95
 ANALYZED : 01/14/95
 INJECTED : 12:49 14:11
 FILE # : ^V2441 ^V2443
 DIL. FACT.: 1 1
 UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0
Acetone	ND	2.0	ND	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0
2-Butanone	ND	4.0	ND	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0
1,3-Dichloropropane	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE #	:	LAB BLANK	00640
LOCATION	:		FIELD BLANK
COLLECTED	:		01/11/95
ANALYZED	:	01/14/95	01/14/95
INJECTED	:	12:49	14:11
FILE	:	^V2441	^V2443
DIL. FACT.	:	1	1
UNIT	:	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	ND	1.0
2-Hexanone	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0
p & m-Xylene	ND	1.0	ND	1.0
o-Xylene	ND	1.0	ND	1.0
Styrene	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0
sec-Butylbenzene	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0
Naphthalene	ND	1.0	ND	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00636	00641	00635	00634
LOCATION :		MW-S DUP	MW-N	MW-S	MW-W
COLLECTED :		01/11/95	01/11/95	01/11/95	01/11/95
ANALYZED :	01/18/95	01/18/95	01/18/95	01/18/95	01/18/95
INJECTED :	00:24	01:04	01:45	02:25	03:46
FILE # :	^V2472	^V2473	^V2474	^V2475	^V2477
DIL. FACT.:	1	1	1	1	1
UNIT :	ug/L	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Acetone	ND	2.0	6.2	2.0	3.4	2.0	7.5	2.0	3.7	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0	14	1.0	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
2-Butanone	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,3-Dichloropropene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00636	00641	00635	00634
LOCATION :		MW-S DUP	MW-N	MW-S	MW-W
COLLECTED :		01/11/95	01/11/95	01/11/95	01/11/95
ANALYZED :	01/18/95	01/18/95	01/18/95	01/18/95	01/18/95
INJECTED :	00:24	01:04	01:45	02:25	03:46
FILE :	^V2472	^V2473	^V2474	^V2475	^V2477
DIL. FACT.:	1	1	1	1	1
UNIT :	ug/L	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
2-Hexanone	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
p & m-Xylene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
o-Xylene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Styrene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
sec-Butylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Naphthalene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0

2 1 0001

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00637
LOCATION : MW-E
COLLECTED : 01/11/95
ANALYZED : 01/18/95
INJECTED : 00:24 04:27
FILE # : ^V2472 ^V2478
DIL. FACT.: 1 1
UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0
Acetone	ND	2.0	8.0	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0
2-Butanone	ND	4.0	0.8 J	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0
1,3-Dichloropropane	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00637
LOCATION : MW-E
COLLECTED : 01/11/95
ANALYZED : 01/18/95
INJECTED : 00:24 04:27
FILE : ^V2472 ^V2478
DIL. FACT.: 1
UNIT : ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	2.2	1.0
2-Hexanone	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0
p & m-Xylene	ND	1.0	ND	1.0
o-Xylene	ND	1.0	ND	1.0
Styrene	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0
sec-Butylbenzene	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0
Naphthalene	ND	1.0	ND	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00639
LOCATION : W PIT
COLLECTED : 01/11/95
ANALYZED : 01/18/95 01/18/95
INJECTED : 09:48 11:09
FILE # : ^V2481 ^V2483
DIL. FACT.: 1 1
UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0
Acetone	ND	2.0	7.3	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0
2-Butanone	ND	4.0	ND	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0
1,3-Dichloropropane	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0

Table 1.1 (Cont) Results of the VOA Analysis for the Water Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00639
 LOCATION : W PIT
 COLLECTED : 01/11/95
 ANALYZED : 01/18/95 01/18/95
 INJECTED : 09:48 11:09
 FILE : ^V2481 ^V2483
 DIL. FACT.: 1 1
 UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	ND	1.0
2-Hexanone	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0
p & m-Xylene	ND	1.0	ND	1.0
o-Xylene	ND	1.0	ND	1.0
Styrene	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0
sec-Butylbenzene	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0
Naphthalene	ND	1.0	ND	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0

Table 1.2 Results of the VOA in Water TICs
WA # 0-098 Pier Drum

Sample ID	Location	Compound	Concentration* (ug/l)	Retention Time (minutes)
Lab Blank 1/13/95		Alkane	7	23.66
00638	N Pit	None Found		
00645	Trip Blank	None Found		
Lab Blank 1/14/95		None Found		
00640	Field blank	None Found		
Lab Blank 1/18/95		None Found		
00636	MW-Dup	None Found		
00641	MW-N	None Found		
00635	MW-S	None Found		
00634	MW-W	None Found		
00637	MW-E	None Found		
Lab Blank 1/18/95		None Found		
00639	West Pit (WPit)	None Found		

* denotes that the concentration is estimated - the response factor was assumed to be 1.

Table 1.3 Results of the VOA Analysis for the Soil Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00643	00644
LOCATION :		SED N	SED E
COLLECTED :		01/11/95	01/11/95
ANALYZED :	01/14/95	01/14/95	01/14/95
INJECTED :	13:30	19:35	20:16
FILE # :	^V2442	^V2451	^V2452
DIL. FACT.:	1	1	1
% SOLID :	100	81	79
UNIT :	ug/Kg	ug/Kg	ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.2	ND	1.3
Chloromethane	ND	1.0	ND	1.2	ND	1.3
Vinyl Chloride	ND	1.0	ND	1.2	ND	1.3
Bromomethane	ND	2.0	ND	2.5	ND	2.5
Chloroethane	ND	1.0	ND	1.2	ND	1.3
Trichlorofluoromethane	ND	1.0	ND	1.2	ND	1.3
Acetone	ND	2.0	ND	2.5	ND	2.5
1,1-Dichloroethene	ND	1.0	ND	1.2	ND	1.3
Carbon Disulfide	ND	1.0	ND	1.2	ND	1.3
Methylene Chloride	ND	1.0	ND	1.2	ND	1.3
Methyl-tertiary-butylether	ND	1.0	ND	1.2	ND	1.3
trans-1,2-Dichloroethene	ND	1.0	ND	1.2	ND	1.3
1,1-Dichloroethane	ND	1.0	ND	1.2	ND	1.3
2-Butanone	ND	4.0	ND	4.9	ND	5.1
2,2-Dichloropropane	ND	1.0	ND	1.2	ND	1.3
cis-1,2-Dichloroethene	ND	1.0	ND	1.2	ND	1.3
Chloroform	ND	1.0	ND	1.2	ND	1.3
1,1-Dichloropropene	ND	1.0	ND	1.2	ND	1.3
1,2-Dichloroethane	ND	1.0	ND	1.2	ND	1.3
1,1,1-Trichloroethane	ND	1.0	ND	1.2	ND	1.3
Carbon Tetrachloride	ND	1.0	ND	1.2	ND	1.3
Benzene	ND	1.0	ND	1.2	ND	1.3
Trichloroethene	ND	1.0	ND	1.2	ND	1.3
1,2-Dichloropropane	ND	1.0	ND	1.2	ND	1.3
Dibromomethane	ND	1.0	ND	1.2	ND	1.3
Bromodichloromethane	ND	1.0	ND	1.2	ND	1.3
cis-1,3-Dichloropropene	ND	1.0	ND	1.2	ND	1.3
trans-1,3-Dichloropropene	ND	1.0	ND	1.2	ND	1.3
1,1,2-Trichloroethane	ND	1.0	ND	1.2	ND	1.3
1,3-Dichloropropane	ND	1.0	ND	1.2	ND	1.3
Dibromochloromethane	ND	1.0	ND	1.2	ND	1.3
1,2-Dibromoethane	ND	1.0	ND	1.2	ND	1.3
Bromoform	ND	1.0	ND	1.2	ND	1.3
4-Methyl-2-Pentanone	ND	2.0	ND	2.5	ND	2.5

Table 1.3 (Cont) Results of the VOA Analysis for the Soil Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00643	00644
LOCATION :		SED N	SED E
COLLECTED :		01/11/95	01/11/95
ANALYZED :	01/14/95	01/14/95	01/14/95
INJECTED :	13:30	19:35	20:16
FILE :	^V2442	^V2451	^V2452
DIL. FACT.:	1	1	1
% SOLID :	100	81	79
UNIT :	ug/Kg	ug/Kg	ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	0.9 J	1.2	ND	1.3
2-Hexanone	ND	2.0	ND	2.5	ND	2.5
Tetrachloroethene	ND	1.0	ND	1.2	ND	1.3
Chlorobenzene	ND	1.0	ND	1.2	ND	1.3
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.2	ND	1.3
Ethylbenzene	ND	1.0	ND	1.2	ND	1.3
p & m-Xylene	ND	1.0	ND	1.2	ND	1.3
o-Xylene	ND	1.0	ND	1.2	ND	1.3
Styrene	ND	1.0	ND	1.2	ND	1.3
Isopropylbenzene	ND	1.0	ND	1.2	ND	1.3
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.2	ND	1.3
1,2,3-Trichloropropane	ND	1.0	ND	1.2	ND	1.3
Bromobenzene	ND	1.0	ND	1.2	ND	1.3
n-Propylbenzene	ND	1.0	ND	1.2	ND	1.3
2-Chlorotoluene	ND	1.0	ND	1.2	ND	1.3
4-Chlorotoluene	ND	1.0	ND	1.2	ND	1.3
1,3,5-Trimethylbenzene	ND	1.0	ND	1.2	ND	1.3
tert-Butylbenzene	ND	1.0	ND	1.2	ND	1.3
1,2,4-Trimethylbenzene	ND	1.0	ND	1.2	ND	1.3
sec-Butylbenzene	ND	1.0	ND	1.2	ND	1.3
1,3-Dichlorobenzene	ND	1.0	ND	1.2	ND	1.3
p-Isopropyltoluene	ND	1.0	ND	1.2	ND	1.3
1,4-Dichlorobenzene	ND	1.0	ND	1.2	ND	1.3
1,2-Dichlorobenzene	ND	1.0	ND	1.2	ND	1.3
n-Butylbenzene	ND	1.0	ND	1.2	ND	1.3
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.2	ND	1.3
1,2,4-Trichlorobenzene	ND	1.0	ND	1.2	ND	1.3
Naphthalene	ND	1.0	ND	1.2	ND	1.3
Hexachlorobutadiene	ND	1.0	ND	1.2	ND	1.3
1,2,3-Trichlorobenzene	ND	1.0	ND	1.2	ND	1.3

Table 1.3 (Cont) Results of the VOA Analysis for the Soil Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00642
LOCATION : SED-S
COLLECTED : 01/11/95
ANALYZED : 01/17/95
INJECTED : 15:41 16:35
FILE # : ^V2460 ^V2461
DIL. FACT.: 1 1
% SOLID : 100 79
UNIT : ug/Kg ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.3
Chloromethane	ND	1.0	ND	1.3
Vinyl Chloride	ND	1.0	ND	1.3
Bromomethane	ND	2.0	ND	2.5
Chloroethane	ND	1.0	ND	1.3
Trichlorofluoromethane	ND	1.0	ND	1.3
Acetone	ND	2.0	207	2.5
1,1-Dichloroethene	ND	1.0	ND	1.3
Carbon Disulfide	ND	1.0	ND	1.3
Methylene Chloride	ND	1.0	ND	1.3
Methyl-tertiary-butylether	ND	1.0	ND	1.3
trans-1,2-Dichloroethene	ND	1.0	ND	1.3
1,1-Dichloroethane	ND	1.0	ND	1.3
2-Butanone	ND	4.0	ND	5.1
2,2-Dichloropropane	ND	1.0	ND	1.3
cis-1,2-Dichloroethene	ND	1.0	ND	1.3
Chloroform	ND	1.0	ND	1.3
1,1-Dichloropropene	ND	1.0	ND	1.3
1,2-Dichloroethane	ND	1.0	ND	1.3
1,1,1-Trichloroethane	ND	1.0	ND	1.3
Carbon Tetrachloride	ND	1.0	ND	1.3
Benzene	ND	1.0	ND	1.3
Trichloroethene	ND	1.0	ND	1.3
1,2-Dichloropropane	ND	1.0	ND	1.3
Dibromomethane	ND	1.0	ND	1.3
Bromodichloromethane	ND	1.0	ND	1.3
cis-1,3-Dichloropropene	ND	1.0	ND	1.3
trans-1,3-Dichloropropene	ND	1.0	ND	1.3
1,1,2-Trichloroethane	ND	1.0	ND	1.3
1,3-Dichloropropane	ND	1.0	ND	1.3
Dibromochloromethane	ND	1.0	ND	1.3
1,2-Dibromoethane	ND	1.0	ND	1.3
Bromoform	ND	1.0	ND	1.3
4-Methyl-2-Pentanone	ND	2.0	ND	2.5

Table 1.3 (Cont) Results of the VQA Analysis for the Soil Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00642
 LOCATION : SED-S
 COLLECTED : 01/11/95
 ANALYZED : 01/17/95 01/17/95
 INJECTED : 15:41 16:35
 FILE : ^V2460 ^V2461
 DIL. FACT.: 1 1
 % SOLID : 100 79
 UNIT : ug/Kg ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	12	1.3
2-Hexanone	ND	2.0	ND	2.5
Tetrachloroethene	ND	1.0	ND	1.3
Chlorobenzene	ND	1.0	ND	1.3
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.3
Ethylbenzene	ND	1.0	670	1.3
p & m-Xylene	ND	1.0	ND	1.3
o-Xylene	ND	1.0	2.4	1.3
Styrene	ND	1.0	2.8	1.3
Isopropylbenzene	ND	1.0	2.1	1.3
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.3
1,2,3-Trichloropropane	ND	1.0	ND	1.3
Bromobenzene	ND	1.0	ND	1.3
n-Propylbenzene	ND	1.0	1.6	1.3
2-Chlorotoluene	ND	1.0	ND	1.3
4-Chlorotoluene	ND	1.0	ND	1.3
1,3,5-Trimethylbenzene	ND	1.0	ND	1.3
tert-Butylbenzene	ND	1.0	ND	1.3
1,2,4-Trimethylbenzene	ND	1.0	3.3	1.3
sec-Butylbenzene	ND	1.0	ND	1.3
1,3-Dichlorobenzene	ND	1.0	ND	1.3
p-Isopropyltoluene	ND	1.0	1.2 J	1.3
1,4-Dichlorobenzene	ND	1.0	ND	1.3
1,2-Dichlorobenzene	ND	1.0	ND	1.3
n-Butylbenzene	ND	1.0	ND	1.3
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.3
1,2,4-Trichlorobenzene	ND	1.0	ND	1.3
Naphthalene	ND	1.0	ND	1.3
Hexachlorobutadiene	ND	1.0	ND	1.3
1,2,3-Trichlorobenzene	ND	1.0	ND	1.3

2 2 10.0

Table 1.4 Results of the VOA in Soil TICs
WA # 0-098 Pier Drum

Sample ID	Location	Compound	Concentration* (ug/l)	Retention Time (minutes)
Lab Blank 1/14/95		None Found		
00643	Sed N	None Found		
00644	Sed E	None Found		
Lab Blank 1/17/95		None Found		
00642	Sed S	Alkyl Benzene	8	20.67

* denotes that the concentration is estimated - the response factor was assumed to be 1.

Table 1.5 Results of the TCLP VOA Analysis
WA # 0-098 Pier Drum

2 1 3511

Sample # Location Collected Analysed Dil. Factor Compound	Laboratory Blank		B 00644 Sed E		B 00643 Sed N		B 00642 Sed S	
	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l
Chloromethane	ND	10	ND	100	ND	100	ND	100
Bromomethane	ND	10	ND	100	ND	100	ND	100
Vinyl chloride	ND	10	ND	100	ND	100	ND	100
Chloroethane	ND	10	ND	100	ND	100	ND	100
Methylene chloride	2.3	J 10	ND	100	ND	100	ND	100
Acetone	ND	50	ND	500	ND	500	ND	500
Carbon Disulfide	ND	10	ND	100	ND	100	ND	100
1,1-Dichloroethene	ND	10	ND	100	ND	100	ND	100
1,1-Dichloroethane	ND	10	ND	100	ND	100	ND	100
cis/trans-1,2-Dichloroethene	ND	10	ND	100	ND	100	ND	100
Chloroform	ND	10	ND	100	ND	100	ND	100
1,2-Dichloroethane	ND	10	ND	100	ND	100	ND	100
2-Butanone	ND	50	ND	500	ND	500	ND	500
1,1,1,-Trichloroethane	ND	10	ND	100	ND	100	ND	100
Carbon tetrachloride	ND	10	ND	100	ND	100	ND	100
Vinyl Acetate	ND	50	ND	500	ND	500	ND	500
Bromodichloromethane	ND	10	ND	100	ND	100	ND	100
1,2-Dichloropropane	ND	10	ND	100	ND	100	ND	100
Trichloroethene	ND	10	ND	100	ND	100	ND	100
Benzene	ND	10	ND	100	ND	100	ND	100
cis-1,3-Dichloropropene	ND	10	ND	100	ND	100	ND	100
Dibromochloromethane	ND	10	ND	100	ND	100	ND	100
trans-1,3-Dichloropropene	ND	10	ND	100	ND	100	ND	100
1,1,2-Trichloroethane	ND	10	ND	100	ND	100	ND	100
Bromoform	ND	10	ND	100	ND	100	ND	100
4-Methyl-2-Pentanone	ND	50	ND	500	ND	500	ND	500
2-Hexanone	ND	50	ND	500	ND	500	ND	500
1,1,2,2-Tetrachloroethane	ND	10	ND	100	ND	100	ND	100
Tetrachloroethene	ND	10	ND	100	ND	100	ND	100
Toluene	1.3	J 10	ND	100	ND	100	ND	100
Chlorobenzene	ND	10	ND	100	ND	100	ND	100
Ethyl benzene	ND	10	ND	100	ND	100	ND	100
Styrene	ND	10	ND	100	ND	100	ND	100
m-Xylene	ND	10	ND	100	ND	100	ND	100
o/p-Xylene	ND	20	ND	200	ND	200	ND	200

Table 1.6 Results of the VOA Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00914
 LOCATION : REAC #4
 COLLECTED : 01/10/95
 ANALYZED : 01/30/95 01/30/95
 INJECTED : 17:11 17:52
 FILE # : ^V2619 ^V2620
 DIL. FACT.: 1 1
 UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	1.0
Chloromethane	ND	1.0	ND	1.0
Vinyl Chloride	ND	1.0	ND	1.0
Bromomethane	ND	2.0	ND	2.0
Chloroethane	ND	1.0	ND	1.0
Trichlorofluoromethane	ND	1.0	ND	1.0
Acetone	ND	2.0	1400	2.0
1,1-Dichloroethene	ND	1.0	ND	1.0
Carbon Disulfide	ND	1.0	ND	1.0
Methylene Chloride	ND	1.0	ND	1.0
Methyl-tertiary-butylether	ND	1.0	ND	1.0
trans-1,2-Dichloroethene	ND	1.0	ND	1.0
1,1-Dichloroethane	ND	1.0	ND	1.0
2-Butanone	ND	4.0	89	4.0
2,2-Dichloropropane	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0
Chloroform	ND	1.0	ND	1.0
1,1-Dichloropropene	ND	1.0	ND	1.0
1,2-Dichloroethane	ND	1.0	ND	1.0
1,1,1-Trichloroethane	ND	1.0	ND	1.0
Carbon Tetrachloride	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0
Trichloroethene	ND	1.0	ND	1.0
1,2-Dichloropropane	ND	1.0	ND	1.0
Dibromomethane	ND	1.0	ND	1.0
Bromodichloromethane	ND	1.0	ND	1.0
cis-1,3-Dichloropropene	ND	1.0	ND	1.0
trans-1,3-Dichloropropene	ND	1.0	ND	1.0
1,1,2-Trichloroethane	ND	1.0	ND	1.0
1,3-Dichloropropane	ND	1.0	ND	1.0
Dibromochloromethane	ND	1.0	ND	1.0
1,2-Dibromoethane	ND	1.0	ND	1.0
Bromoform	ND	1.0	ND	1.0
4-Methyl-2-Pentanone	ND	2.0	ND	2.0

Table 1.6 (Cont) Results of the VOA Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

SAMPLE # : LAB BLANK 00914
LOCATION : REAC #4
COLLECTED : 01/10/95
ANALYZED : 01/30/95 01/30/95
INJECTED : 17:11 17:52
FILE : ^V2619 ^V2620
DIL. FACT.: 1 1
UNIT : ug/L ug/L

COMPOUND	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	9.6	1.0
2-Hexanone	ND	2.0	ND	2.0
Tetrachloroethene	ND	1.0	ND	1.0
Chlorobenzene	ND	1.0	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	37	1.0
p & m-Xylene	ND	1.0	ND	1.0
o-Xylene	ND	1.0	0.8 J	1.0
Styrene	ND	1.0	26	1.0
Isopropylbenzene	ND	1.0	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	1.0
1,2,3-Trichloropropane	ND	1.0	ND	1.0
Bromobenzene	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0
2-Chlorotoluene	ND	1.0	ND	1.0
4-Chlorotoluene	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0
tert-Butylbenzene	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	45	1.0
sec-Butylbenzene	ND	1.0	ND	1.0
1,3-Dichlorobenzene	ND	1.0	ND	1.0
p-Isopropyltoluene	ND	1.0	ND	1.0
1,4-Dichlorobenzene	ND	1.0	ND	1.0
1,2-Dichlorobenzene	ND	1.0	ND	1.0
n-Butylbenzene	ND	1.0	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0	ND	1.0
Naphthalene	ND	1.0	7.2	1.0
Hexachlorobutadiene	ND	1.0	ND	1.0
1,2,3-Trichlorobenzene	ND	1.0	ND	1.0

Table 1.6 (Cont) Results of the VOA Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00912	00913
LOCATION :		REAC #9	REAC #2
COLLECTED :		01/10/95	01/10/95
ANALYZED :	01/30/95	01/30/95	01/30/95
INJECTED :	17:11	18:33	19:14
FILE # :	^V2619	^V2621	^V2622
DIL. FACT.:	1	5	5
UNIT :	mg/L	mg/L	mg/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	ND	1.0	ND	5.0	ND	5.0
Chloromethane	ND	1.0	ND	5.0	ND	5.0
Vinyl Chloride	ND	1.0	ND	5.0	ND	5.0
Bromomethane	ND	2.0	ND	10.0	ND	10.0
Chloroethane	ND	1.0	ND	5.0	ND	5.0
Trichlorofluoromethane	ND	1.0	ND	5.0	ND	5.0
Acetone	ND	2.0	130000	10.0	230000	10.0
1,1-Dichloroethene	ND	1.0	ND	5.0	ND	5.0
Carbon Disulfide	ND	1.0	ND	5.0	ND	5.0
Methylene Chloride	ND	1.0	ND	5.0	ND	5.0
Methyl-tertiary-butylether	ND	1.0	ND	5.0	ND	5.0
trans-1,2-Dichloroethene	ND	1.0	ND	5.0	ND	5.0
1,1-Dichloroethane	ND	1.0	ND	5.0	ND	5.0
2-Butanone	ND	4.0	ND	20.0	ND	20.0
2,2-Dichloropropane	ND	1.0	ND	5.0	ND	5.0
cis-1,2-Dichloroethene	ND	1.0	ND	5.0	ND	5.0
Chloroform	ND	1.0	ND	5.0	ND	5.0
1,1-Dichloropropene	ND	1.0	ND	5.0	ND	5.0
1,2-Dichloroethane	ND	1.0	ND	5.0	ND	5.0
1,1,1-Trichloroethane	ND	1.0	ND	5.0	ND	5.0
Carbon Tetrachloride	ND	1.0	ND	5.0	ND	5.0
Benzene	ND	1.0	11	5.0	12	5.0
Trichloroethene	ND	1.0	ND	5.0	ND	5.0
1,2-Dichloropropane	ND	1.0	ND	5.0	ND	5.0
Dibromomethane	ND	1.0	ND	5.0	ND	5.0
Bromodichloromethane	ND	1.0	ND	5.0	ND	5.0
cis-1,3-Dichloropropene	ND	1.0	ND	5.0	ND	5.0
trans-1,3-Dichloropropene	ND	1.0	ND	5.0	ND	5.0
1,1,2-Trichloroethane	ND	1.0	ND	5.0	ND	5.0
1,3-Dichloropropane	ND	1.0	ND	5.0	ND	5.0
Dibromochloromethane	ND	1.0	ND	5.0	ND	5.0
1,2-Dibromoethane	ND	1.0	ND	5.0	ND	5.0
Bromoform	ND	1.0	ND	5.0	ND	5.0
4-Methyl-2-Pentanone	ND	2.0	ND	10.0	ND	10.0

Table 1.6 (Cont) Results of the VOA Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

SAMPLE # :	LAB BLANK	00912	00913
LOCATION :		REAC #9	REAC #2
COLLECTED :		01/10/95	01/10/95
ANALYZED :	01/30/95	01/30/95	01/30/95
INJECTED :	17:11	18:33	19:14
FILE :	^V2619	^V2621	^V2622
DIL. FACT.:	1	5	5
UNIT :	mg/L	mg/L	mg/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL
Toluene	ND	1.0	5.4	5.0	4.1 J	5.0
2-Hexanone	ND	2.0	ND	10.0	ND	10.0
Tetrachloroethene	ND	1.0	ND	5.0	ND	5.0
Chlorobenzene	ND	1.0	ND	5.0	ND	5.0
1,1,1,2-Tetrachloroethane	ND	1.0	ND	5.0	ND	5.0
Ethylbenzene	ND	1.0	21	5.0	88	5.0
p & m-Xylene	ND	1.0	16	5.0	51	5.0
o-Xylene	ND	1.0	8.4	5.0	ND	5.0
Styrene	ND	1.0	1200	5.0	16000	5.0
Isopropylbenzene	ND	1.0	6.5	5.0	21	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	ND	5.0	ND	5.0
1,2,3-Trichloropropane	ND	1.0	ND	5.0	ND	5.0
Bromobenzene	ND	1.0	ND	5.0	ND	5.0
n-Propylbenzene	ND	1.0	7.6	5.0	17	5.0
2-Chlorotoluene	ND	1.0	ND	5.0	ND	5.0
4-Chlorotoluene	ND	1.0	ND	5.0	ND	5.0
1,3,5-Trimethylbenzene	ND	1.0	ND	5.0	ND	5.0
tert-Butylbenzene	ND	1.0	ND	5.0	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0	17	5.0	23	5.0
sec-Butylbenzene	ND	1.0	ND	5.0	ND	5.0
1,3-Dichlorobenzene	ND	1.0	ND	5.0	ND	5.0
p-Isopropyltoluene	ND	1.0	ND	5.0	ND	5.0
1,4-Dichlorobenzene	ND	1.0	ND	5.0	ND	5.0
1,2-Dichlorobenzene	ND	1.0	ND	5.0	ND	5.0
n-Butylbenzene	ND	1.0	ND	5.0	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	1.0	ND	5.0	ND	5.0
1,2,4-Trichlorobenzene	ND	1.0	ND	5.0	ND	5.0
Naphthalene	ND	1.0	3.4 J	5.0	ND	5.0
Hexachlorobutadiene	ND	1.0	ND	5.0	ND	5.0
1,2,3-Trichlorobenzene	ND	1.0	ND	5.0	ND	5.0

Table 1.7 Results of the VOA in Drum Liquid TICs
WA # 0-098 Pier Drum

Sample ID	Location	Compound	Concentration* (ug/l)	Retention Time (minutes)
Lab Blank 1/30/95		None Found		
00914	REAC #4	Ketone	8	18.39
00912	REAC #9	Unknown	160	5.94
		Alkyl Benzene	30	28.68
00913	REAC #2	Unknown	170	5.91
		Alkyl Benzene	75	20.68
		Unknown	50	21.42
Lab Blank 1/31/95		None Found		

* denotes that the concentration is estimated - the response factor was assumed to be 1.

Table 1.8 Results of the TCLP VOA Analysis for the Drum Solid Samples
WA # 0-098 Pier Drum

2, 2 1517

Sample # Location Collected Analysed Dil. Factor Compound	Lab Blank		00911 Composit 1, 8, 9, 11		00915 REAC #5		00916 Composit 3, 7, 10, 13, 14	
	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l
Chloromethane	ND	10	ND	5000	ND	5000	ND	2500
Bromomethane	ND	10	ND	5000	ND	5000	ND	2500
Vinyl chloride	ND	10	ND	5000	ND	5000	ND	2500
Chloroethane	ND	10	ND	5000	ND	5000	ND	2500
Methylene chloride	2.3 J	10	1300 JB	5000	1100 JB	5000	ND	2500
Acetone	ND	10	1300000	5000	11000 J	5000	ND	2500
Carbon Disulfide	ND	10	ND	5000	ND	5000	ND	2500
1,1-Dichloroethene	ND	10	ND	5000	ND	5000	ND	2500
1,1-Dichloroethane	ND	10	856 J	5000	ND	5000	ND	2500
cis/trans-1,2-Dichloroethene	ND	10	ND	5000	ND	5000	ND	2500
Chloroform	ND	10	ND	5000	ND	5000	ND	2500
1,2-Dichloroethane	ND	10	ND	5000	ND	5000	ND	2500
2-Butanone	ND	10	ND	5000	ND	5000	ND	2500
1,1,1,-Trichloroethane	ND	10	ND	5000	ND	5000	ND	2500
Carbon tetrachloride	ND	10	ND	5000	ND	5000	ND	2500
Vinyl Acetate	ND	10	ND	5000	ND	5000	ND	2500
Bromodichloromethane	ND	10	ND	5000	ND	5000	ND	2500
1,2-Dichloropropane	ND	10	ND	5000	ND	5000	ND	2500
Trichloroethene	ND	10	ND	5000	ND	5000	ND	2500
Benzene	ND	10	ND	5000	ND	5000	ND	2500
cis-1,3-Dichloropropene	ND	10	960 J	5000	ND	5000	ND	2500
Dibromochloromethane	ND	10	ND	5000	ND	5000	ND	2500
trans-1,3-Dichloropropene	ND	10	ND	5000	ND	5000	ND	2500
1,1,2-Trichloroethane	ND	10	ND	5000	ND	5000	ND	2500
Bromoform	ND	10	ND	5000	ND	5000	ND	2500
4-Methyl-2-Pentanone	3.1 J	10	ND	5000	ND	5000	ND	2500
2-Hexanone	ND	10	ND	5000	ND	5000	ND	2500
1,1,2,2-Tetrachloroethane	ND	10	ND	5000	ND	5000	ND	2500
Tetrachloroethene	ND	10	ND	5000	ND	5000	ND	2500
Toluene	1.6 J	10	1400 JB	5000	730 JB	5000	550 JB	2500
Chlorobenzene	ND	10	ND	5000	ND	5000	ND	2500
Ethyl benzene	ND	10	1000 J	5000	ND	5000	ND	2500
Styrene	ND	10	6100	5000	130000	5000	40000	2500
m&p-Xylene	1.9 J	10	1800 JB	5000	ND	5000	520 JB	2500
o-Xylene	ND	10	790 J	5000	ND	5000	ND	2500
Methyl-tert-butyl Ether	ND	10	ND	5000	ND	5000	ND	2500
Tert-Butyl alcohol	ND	10	ND	5000	ND	5000	ND	2500

Table 1.9 Results of the BNA in Water Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK011895	CD00636	CD00638	CD00641	CD00635
FILE :	^PD010	^PD011	^PD012	^PD013	^PD014
LOCATION* :	--	MW-DUP	N-Pit	MW-N	MW-S
COLLECTED :	--	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/18/95	01/18/95	01/18/95	01/18/95	01/18/95
ANALYZED :	01/30/95	01/30/95	01/30/95	01/30/95	01/30/95
INJECTED :	13:36	14:31	15:26	16:21	17:16
MATRIX :	WATER	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.0	1.1	1.0	1.0
UNITS :	ug/L	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Phenol	ND	10	ND	10	ND	11	ND	11	ND	10
bis(2-Chloroethyl)Ether	ND	10	ND	10	ND	11	ND	11	ND	10
2-Chlorophenol	ND	10	ND	10	ND	11	ND	11	ND	10
1,3-Dichlorobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
1,4-Dichlorobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
Benzyl alcohol	ND	10	ND	10	ND	11	ND	11	ND	10
1,2-Dichlorobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
2-Methylphenol	ND	10	ND	10	ND	11	ND	11	ND	10
bis(2-Chloroisopropyl)ether	ND	10	ND	10	ND	11	ND	11	ND	10
4-Methylphenol	ND	10	ND	10	ND	11	ND	11	ND	10
N-Nitroso-Di-n-propylamine	ND	10	ND	10	ND	11	ND	11	ND	10
Hexachloroethane	ND	10	ND	10	ND	11	ND	11	ND	10
Nitrobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
Isophorone	ND	10	ND	10	ND	11	ND	11	ND	10
2-Nitrophenol	ND	10	ND	10	ND	11	ND	11	ND	10
2,4-Dimethylphenol	ND	10	ND	10	ND	11	ND	11	ND	10
bis(2-Chloroethoxy)methane	ND	10	ND	10	ND	11	ND	11	ND	10
2,4-Dichlorophenol	ND	10	ND	10	ND	11	ND	11	ND	10
1,2,4-Trichlorobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
Naphthalene	ND	10	ND	10	ND	11	ND	11	ND	10
4-Chloroaniline	ND	10	ND	10	ND	11	ND	11	ND	10
Hexachlorobutadiene	ND	10	ND	10	ND	11	ND	11	ND	10
4-Chloro-3-methylphenol	ND	10	ND	10	ND	11	ND	11	ND	10
2-Methylnaphthalene	ND	10	ND	10	ND	11	ND	11	ND	10
Hexachlorocyclopentadiene	ND	10	ND	10	ND	11	ND	11	ND	10
2,4,6-Trichlorophenol	ND	10	ND	10	ND	11	ND	11	ND	10
2,4,5-Trichlorophenol	ND	50	ND	52	ND	54	ND	53	ND	52
2-Chloronaphthalene	ND	10	ND	10	ND	11	ND	11	ND	10
2-Nitroaniline	ND	50	ND	52	ND	54	ND	53	ND	52
Dimethylphthalate	ND	10	ND	10	ND	11	ND	11	ND	10
Acenaphthylene	ND	10	ND	10	ND	11	ND	11	ND	10
3-Nitroaniline	ND	50	ND	52	ND	54	ND	53	ND	52
Acenaphthene	ND	10	ND	10	ND	11	ND	11	ND	10
2,4-Dinitrophenol	ND	50	ND	52	ND	54	ND	53	ND	52

* denotes that, at the request of the task leader, the locations have been added

Table 1.9 (Cont) Results of the BNA in Water Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK011895	CD00636	CD00638	CD00641	CD00635
FILE :	^PD010	^PD011	^PD012	^PD013	^PD014
LOCATION* :	--	MW-DUP	N-Pit	MW-N	MW-S --
COLLECTED :	--	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/18/95	01/18/95	01/18/95	01/18/95	01/18/95
ANALYZED :	01/30/95	01/30/95	01/30/95	01/30/95	01/30/95
INJECTED :	13:36	14:31	15:26	16:21	17:16
MATRIX :	WATER	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.0	1.1	1.0	1.0
UNITS :	ug/L	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
4-Nitrophenol	ND	50	ND	52	ND	54	ND	53	ND	52
Dibenzofuran	ND	10	ND	10	ND	11	ND	11	ND	10
2,6-Dinitrotoluene	ND	10	ND	10	ND	11	ND	11	ND	10
2,4-Dinitrotoluene	ND	10	ND	10	ND	11	ND	11	ND	10
Diethylphthalate	ND	10	ND	10	ND	11	ND	11	ND	10
4-Chlorophenyl-phenylether	ND	10	ND	10	ND	11	ND	11	ND	10
Fluorene	ND	10	ND	10	ND	11	ND	11	ND	10
4-Nitroaniline	ND	50	ND	52	ND	54	ND	53	ND	52
4,6-Dinitro-2-methylphenol	ND	50	ND	52	ND	54	ND	53	ND	52
N-Nitrosodiphenylamine	ND	10	ND	10	ND	11	ND	11	ND	10
4-Bromophenyl-phenylether	ND	10	ND	10	ND	11	ND	11	ND	10
Hexachlorobenzene	ND	10	ND	10	ND	11	ND	11	ND	10
Pentachlorophenol	ND	50	ND	52	ND	54	ND	53	ND	52
Phenanthrene	ND	10	ND	10	ND	11	ND	11	ND	10
Anthracene	ND	10	ND	10	ND	11	ND	11	ND	10
Carbazole	ND	10	ND	10	ND	11	ND	11	ND	10
Di-n-butylphthalate	2(J)	10	1(J,B)	10	38(B)	11	50(B)	11	2(J,B)	10
Fluoranthene	ND	10	ND	10	ND	11	ND	11	ND	10
Pyrene	ND	10	ND	10	ND	11	ND	11	ND	10
Butylbenzylphthalate	ND	10	ND	10	ND	11	2(J)	11	ND	10
3,3'-Dichlorobenzidine	ND	50	ND	52	ND	54	ND	53	ND	52
Benzo(a)anthracene	ND	10	ND	10	ND	11	ND	11	ND	10
Bis(2-Ethylhexyl)phthalate	1(J)	10	ND	10	2(J,B)	11	ND	11	3(J,B)	10
Chrysene	ND	10	ND	10	ND	11	ND	11	ND	10
Di-n-octylphthalate	ND	10	ND	10	ND	11	ND	11	ND	10
Benzo(b)fluoranthene	ND	10	ND	10	ND	11	ND	11	ND	10
Benzo(k)fluoranthene	ND	10	ND	10	ND	11	ND	11	ND	10
Benzo(a)pyrene	ND	10	ND	10	ND	11	ND	11	ND	10
Indeno(1,2,3-cd)pyrene	ND	10	ND	10	ND	11	ND	11	ND	10
Dibenzo(a,h)anthracene	ND	10	ND	10	ND	11	ND	11	ND	10
Benzo(g,h,i)perylene	ND	10	ND	10	ND	11	ND	11	ND	10

* denotes that, at the request of the task leader, the locations have been added

Table 1.9 (Cont) Results of the BNA in Water Analysis
WA # 0-098 Pier Drum

SAMPLE # :	CD00639	CD00640	CD00634	CD00637
FILE :	^PD015	^PD016	^PD019	^PD032
LOCATION* :	West Pit (WPit)	Field Blank	MW-W	MW-E
COLLECTED :	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/18/95	01/18/95	01/18/95	01/18/95
ANALYZED :	01/30/95	01/30/95	01/30/95	02/01/95
INJECTED :	18:11	19:05	21:46	11:37
MATRIX :	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.6	1.1	1.1
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Phenol	ND	10	ND	16	ND	11	ND	11
bis(-2-Chloroethyl)Ether	ND	10	ND	16	ND	11	ND	11
2-Chlorophenol	ND	10	ND	16	ND	11	ND	11
1,3-Dichlorobenzene	ND	10	ND	16	ND	11	ND	11
1,4-Dichlorobenzene	ND	10	ND	16	ND	11	ND	11
Benzyl alcohol	ND	10	ND	16	ND	11	ND	11
1,2-Dichlorobenzene	ND	10	ND	16	ND	11	ND	11
2-Methylphenol	ND	10	ND	16	ND	11	ND	11
bis(2-Chloroisopropyl)ether	ND	10	ND	16	ND	11	ND	11
4-Methylphenol	ND	10	ND	16	ND	11	ND	11
N-Nitroso-Di-n-propylamine	ND	10	ND	16	ND	11	ND	11
Hexachloroethane	ND	10	ND	16	ND	11	ND	11
Nitrobenzene	ND	10	ND	16	ND	11	ND	11
Isophorone	ND	10	ND	16	ND	11	ND	11
2-Nitrophenol	ND	10	ND	16	ND	11	ND	11
2,4-Dimethylphenol	ND	10	ND	16	ND	11	ND	11
bis(2-Chloroethoxy)methane	ND	10	ND	16	ND	11	ND	11
2,4-Dichlorophenol	ND	10	ND	16	ND	11	ND	11
1,2,4-Trichlorobenzene	ND	10	ND	16	ND	11	ND	11
Naphthalene	ND	10	ND	16	ND	11	ND	11
4-Chloroaniline	ND	10	ND	16	ND	11	ND	11
Hexachlorobutadiene	ND	10	ND	16	ND	11	ND	11
4-Chloro-3-methylphenol	ND	10	ND	16	ND	11	ND	11
2-Methylnaphthalene	ND	10	ND	16	ND	11	ND	11
Hexachlorocyclopentadiene	ND	10	ND	16	ND	11	ND	11
2,4,6-Trichlorophenol	ND	10	ND	16	ND	11	ND	11
2,4,5-Trichlorophenol	ND	52	ND	78	ND	57	ND	55
2-Chloronaphthalene	ND	10	ND	16	ND	11	ND	11
2-Nitroaniline	ND	52	ND	78	ND	57	ND	55
Dimethylphthalate	ND	10	ND	16	ND	11	ND	11
Acenaphthylene	ND	10	ND	16	ND	11	ND	11
3-Nitroaniline	ND	52	ND	78	ND	57	ND	55
Acenaphthene	ND	10	ND	16	ND	11	ND	11
2,4-Dinitrophenol	ND	52	ND	78	ND	57	ND	55

* denotes that, at the request of the task leader, the locations have been added

Table 1.9 (Cont) Results of the BNA in Water Analysis
WA # 0-098 Pier Drum

SAMPLE # :	CD00639	CD00640	CD00634	CD00637
FILE :	^PD015	^PD016	^PD019	^PD032
LOCATION* :	West Pit (WPit)	Field Blank	MW-W	MW-E
COLLECTED :	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/18/95	01/18/95	01/18/95	01/18/95
ANALYZED :	01/30/95	01/30/95	01/30/95	02/01/95
INJECTED :	18:11	19:05	21:46	11:37
MATRIX :	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.6	1.1	1.1
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
4-Nitrophenol	ND	52	ND	78	ND	57	ND	55
Dibenzofuran	ND	10	ND	16	ND	11	ND	11
2,6-Dinitrotoluene	ND	10	ND	16	ND	11	ND	11
2,4-Dinitrotoluene	ND	10	ND	16	ND	11	ND	11
Diethylphthalate	ND	10	ND	16	ND	11	ND	11
4-Chlorophenyl-phenylether	ND	10	ND	16	ND	11	ND	11
Fluorene	ND	10	ND	16	ND	11	ND	11
4-Nitroaniline	ND	52	ND	78	ND	57	ND	55
4,6-Dinitro-2-methylphenol	ND	52	ND	78	ND	57	ND	55
N-Nitrosodiphenylamine	ND	10	ND	16	ND	11	ND	11
4-Bromophenyl-phenylether	ND	10	ND	16	ND	11	ND	11
Hexachlorobenzene	ND	10	ND	16	ND	11	ND	11
Pentachlorophenol	ND	52	ND	78	ND	57	ND	55
Phenanthrene	ND	10	ND	16	ND	11	ND	11
Anthracene	ND	10	ND	16	ND	11	ND	11
Carbazole	ND	10	ND	16	ND	11	ND	11
Di-n-butylphthalate	47(B)	10	4(J,B)	16	66(B)	11	1(J,B)	11
Fluoranthene	ND	10	ND	16	ND	11	ND	11
Pyrene	ND	10	ND	16	ND	11	ND	11
Butylbenzylphthalate	4(J)	10	ND	16	ND	11	ND	11
3,3'-Dichlorobenzidine	ND	52	ND	78	ND	57	ND	55
Benzo(a)anthracene	ND	10	ND	16	ND	11	ND	11
Bis(2-Ethylhexyl)phthalate	ND	10	ND	16	1(J,B)	11	ND	11
Chrysene	ND	10	ND	16	ND	11	ND	11
Di-n-octylphthalate	ND	10	ND	16	ND	11	ND	11
Benzo(b)fluoranthene	ND	10	ND	16	ND	11	ND	11
Benzo(k)fluoranthene	ND	10	ND	16	ND	11	ND	11
Benzo(a)pyrene	ND	10	ND	16	ND	11	ND	11
Indeno(1,2,3-cd)pyrene	ND	10	ND	16	ND	11	ND	11
Dibenzo(a,h)anthracene	ND	10	ND	16	ND	11	ND	11
Benzo(g,h,i)perylene	ND	10	ND	16	ND	11	ND	11

* denotes that, at the request of the task leader, the locations have been added

Table 1. ¹⁰Results of Tentatively Identified Compounds for BNA in WaterWA# 0-098 Pier Drum

2 1 1022

Sample Number
Lab File #WBLK011895
SPD 910Unit
Conversion Factorg/L
100

CAS#	Compound Name	Q	RT	Conc.*	
1. -	Carboxylic Acid	C ₁₂ H ₂₂ O ₂	-	31.02	11
2. -	Alkane	C ₁₂ H ₂₄	-	33.14	78
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					

* Estimated Concentration (Response Factor = 1.0)

Table 1. ¹⁰(cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

CD00676
SPD011

Unit
 Conversion Factor

2.5
mg/L
1.03

CAS#	Compound Name	Q	RT	Conc.*
1. 10544500	Sulfur, mol. 58.	65	27.83	15
2. -	Carboxylic Acid AntHemO ₂	-	31.03	9
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 1c (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

CD00638
SPD012

Unit
 Conversion Factor

mg/L
1.08

CAS#	Compound Name	Q	RT	Conc.*
1. —	Unknown	—	6.70	8
2. —	↓	—	15.95	10
3. —	↓	—	16.76	5
4. —	↓	—	28.84	5
5. —	↓	—	31.03	12
6. —	Alkane C₁₀H₂₂	—	35.01	5
7. —	↓	—	36.01	5
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.10 (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0.098 Pier Drum

Sample Number
 Lab File #

CD00641
SPD013

Unit
 Conversion Factor

2.2
mg/L
1.65

CAS#	Compound Name	Q	RT	Conc.*
1. 10544500	Sulfur S ₈	51	27.82	6
2. —	unknown	—	28.84	30
3. —	Carboxylic Acid C ₁₂ H ₂₂ O ₂	—	31.05	44
4. —	Alkane	—	34.11	5
5. —	↓	—	35.03	6
6. —	↓	—	36.03	5
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.10 (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

2 1 3326

Sample Number
 Lab File #

CD00635
SPD014

Unit
 Conversion Factor

ug/L
1.03

CAS#	Compound Name	Q	RT	Conc.*
1. —	Unknown	—	6.79	11
2. 10544500	Sulfur	S8	80 27.81	8
3. —	Carboxylic Acid	C ₁₂ H ₂₂ O ₂	— 31.02	9
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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17.				
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19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. ¹⁰ (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

2 1 0027

Sample Number
 Lab File #

CD00619
>PD 015

Unit
 Conversion Factor

mg/L
1.04

CAS#	Compound Name	Q	RT	Conc.*
1. —	Unknown	—	28.01	6
2. —	Carboxylic Acid C ₁₀ H ₈ O ₂	—	31.06	8
3. —	Phthalate	—	32.79	6
4. —	Alkane	—	33.16	5
5. —	↓	—	34.12	7
6. —	↓	—	35.06	10
7. —	↓	—	36.06	7
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 10 (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0.098 Peer Drum

2 2 0523

Sample Number
 Lab File #

CD00640
SPD 016

Unit
 Conversion Factor

08/L
1.56

CAS#	Compound Name	Q	RT	Conc.*
1. -	Carboxylic Acid	-	31.05	16
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.10 (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

2 2 8829

Sample Number
 Lab File #

CD00634
SPD019

Unit
 Conversion Factor

µg/L
1.14

CAS#	Compound Name	Q	RT	Conc.*
1. —	Unknown	—	6.70	8
2. —		—	6.79	10
3. —		—	21.28	7
4. 10544500	Sulfur S ₈	81	27.87	18
5. —	Carboxylic Acid C ₁₀ H ₂₀ O ₂	—	28.86	7
6. —	Unknown	—	28.86	7
7. —	Carboxylic Acid C ₁₂ H ₂₄ O ₂	—	31.05	17
8. —	Alkane C ₁₄ H ₃₀	—	32.18	7
9. —		—	33.17	12
10. —		—	34.13	1 ⁿ
11. —		—	35.06	10 ⁿ
12. —		—	36.07	17
13. —		—	37.23	11
14. —	↓	—	38.57	9
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 10 (cont.) Results of Tentatively Identified Compounds for BNA in Water
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

CD00637
SPD 032

Unit
 Conversion Factor

98/L
1.11

CAS#	Compound Name	Q	RT	Conc.*
1. -	Benzoic Acid Derivatives	-	13.65	9
2. -	Benzenacetate	-	15.39	21
3. -	Unknown	-	15.61	6
4. -	↓	-	16.42	6
5. 85449	phthalic anhydride $C_8H_4O_3$	95	16.66	7
6. -	Unknown	-	20.18	6
7. -	↓	-	24.51	6
8. 10544500	Sulfur S_8	64	27.91	21
9. -	Unknown	-	28.02	11
10. -	Methyl tricycloalkane carboxylic Acid $C_{13}H_{20}O_2$	-	28.22	8
11.				
12. -	Unknown	-	28.27	12
13. -	Carboxylic Acid $C_8H_{10}O_2$	-	31.06	38
14. -	Alkane	-	35.04	6
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

00064

Table 1.11 Results of the BNA in Soil Analysis
WA # 0-098 Pier Drum

SAMPLE # :	SBLK011395	A00642	A00643	A00644
FILE :	^PD024	^PD025	^PD026	^PD027
LOCATION* :	--	Sed S	Sed N	--
COLLECTED :	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/13/95	01/13/95	01/13/95	01/13/95
ANALYZED :	01/31/95	01/31/95	01/31/95	01/31/95
INJECTED :	12:14	13:08	14:04	15:00
MATRIX :	SOIL	SOIL	SOIL	SOIL
DIL. FACT.:	1.0	1.0	1.0	1.0
% SOLID :	100	81	83	82
AMT. USED :	30	30	30	30
FINAL VOL :	1	1	1	1
UNITS :	ug/Kg	ug/Kg	ug/Kg	ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Phenol	ND	330	ND	407	ND	398	ND	402
bis(-2-Chloroethyl)Ether	ND	330	ND	407	ND	398	ND	402
2-Chlorophenol	ND	330	ND	407	ND	398	ND	402
1,3-Dichlorobenzene	ND	330	ND	407	ND	398	ND	402
1,4-Dichlorobenzene	ND	330	ND	407	ND	398	ND	402
Benzyl alcohol	ND	330	ND	407	ND	398	ND	402
1,2-Dichlorobenzene	ND	330	ND	407	ND	398	ND	402
2-Methylphenol	ND	330	ND	407	ND	398	ND	402
bis(2-Chloroisopropyl)ether	ND	330	ND	407	ND	398	ND	402
4-Methylphenol	ND	330	ND	407	ND	398	ND	402
N-Nitroso-Di-n-propylamine	ND	330	ND	407	ND	398	ND	402
Hexachloroethane	ND	330	ND	407	ND	398	ND	402
Nitrobenzene	ND	330	ND	407	ND	398	ND	402
Isophorone	ND	330	ND	407	ND	398	ND	402
2-Nitrophenol	ND	330	ND	407	ND	398	ND	402
2,4-Dimethylphenol	ND	330	ND	407	ND	398	ND	402
bis(2-Chloroethoxy)methane	ND	330	ND	407	ND	398	ND	402
2,4-Dichlorophenol	ND	330	ND	407	ND	398	ND	402
1,2,4-Trichlorobenzene	ND	330	ND	407	ND	398	ND	402
Naphthalene	ND	330	ND	407	ND	398	ND	402
4-Chloroaniline	ND	330	ND	407	ND	398	ND	402
Hexachlorobutadiene	ND	330	ND	407	ND	398	ND	402
4-Chloro-3-methylphenol	ND	330	ND	407	ND	398	ND	402
2-Methylnaphthalene	ND	330	ND	407	ND	398	ND	402
Hexachlorocyclopentadiene	ND	330	ND	407	ND	398	ND	402
2,4,6-Trichlorophenol	ND	330	ND	407	ND	398	ND	402
2,4,5-Trichlorophenol	ND	1650	ND	2037	ND	1988	ND	2012
2-Chloronaphthalene	ND	330	ND	407	ND	398	ND	402
2-Nitroaniline	ND	1650	ND	2037	ND	1988	ND	2012
Dimethylphthalate	ND	330	ND	407	ND	398	ND	402
Acenaphthylene	ND	330	ND	407	ND	398	ND	402
3-Nitroaniline	ND	1650	ND	2037	ND	1988	ND	2012
Acenaphthene	ND	330	ND	407	ND	398	ND	402
2,4-Dinitrophenol	ND	1650	ND	2037	ND	1988	ND	2012

* denotes that, at the request of the task leader, the locations have been added

Table 1.11 (Cont) Results of the BNA in Soil Analysis
WA # 0-098 Pier Drum

SAMPLE # :	SBLK011395	A00642	A00643	A00644
FILE :	^PD024	^PD025	^PD026	^PD027
LOCATION* :	--	Sed S	Sed N	--
COLLECTED :	01/11/95	01/11/95	01/11/95	01/11/95
EXTRACTED :	01/13/95	01/13/95	01/13/95	01/13/95
ANALYZED :	01/31/95	01/31/95	01/31/95	01/31/95
INJECTED :	12:14	13:08	14:04	15:00
MATRIX :	SOIL	SOIL	SOIL	SOIL
DIL. FACT.:	1.0	1.0	1.0	1.0
% SOLID :	100	81	83	82
AMT. USED :	30	30	30	30
FINAL VOL :	1	1	1	1
UNITS :	ug/Kg	ug/Kg	ug/Kg	ug/Kg

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
4-Nitrophenol	ND	1650	ND	2037	ND	1988	ND	2012
Dibenzofuran	ND	330	ND	407	ND	398	ND	402
2,6-Dinitrotoluene	ND	330	ND	407	ND	398	ND	402
2,4-Dinitrotoluene	ND	330	ND	407	ND	398	ND	402
Diethylphthalate	ND	330	87(J)	407	ND	398	ND	402
4-Chlorophenyl-phenylether	ND	330	ND	407	ND	398	ND	402
Fluorene	ND	330	ND	407	ND	398	ND	402
4-Nitroaniline	ND	1650	ND	2037	ND	1988	ND	2012
4,6-Dinitro-2-methylphenol	ND	1650	ND	2037	ND	1988	ND	2012
N-Nitrosodiphenylamine	ND	330	ND	407	ND	398	ND	402
4-Bromophenyl-phenylether	ND	330	ND	407	ND	398	ND	402
Hexachlorobenzene	ND	330	ND	407	ND	398	ND	402
Pentachlorophenol	ND	1650	ND	2037	ND	1988	ND	2012
Phenanthrene	ND	330	ND	407	ND	398	ND	402
Anthracene	ND	330	ND	407	ND	398	ND	402
Carbazole	ND	330	ND	407	ND	398	ND	402
Di-n-butylphthalate	2400	330	2765(B)	407	3029(B)	398	1581(B)	402
Fluoranthene	ND	330	ND	407	ND	398	ND	402
Pyrene	ND	330	ND	407	ND	398	ND	402
Butylbenzylphthalate	150(J)	330	179(J,B)	407	156(J,B)	398	ND	402
3,3'-Dichlorobenzidine	ND	1650	ND	2037	ND	1988	ND	2012
Benzo(a)anthracene	ND	330	ND	407	ND	398	ND	402
Bis(2-Ethylhexyl)phthalate	620	330	338(J,B)	407	ND	398	39(J,B)	402
Chrysene	ND	330	ND	407	ND	398	ND	402
Di-n-octylphthalate	ND	330	ND	407	ND	398	ND	402
Benzo(b)fluoranthene	ND	330	ND	407	ND	398	ND	402
Benzo(k)fluoranthene	ND	330	ND	407	ND	398	ND	402
Benzo(a)pyrene	ND	330	ND	407	ND	398	ND	402
Indeno(1,2,3-cd)pyrene	ND	330	ND	407	ND	398	ND	402
Dibenzo(a,h)anthracene	ND	330	ND	407	ND	398	ND	402
Benzo(g,h,i)perylene	ND	330	ND	407	ND	398	ND	402

* denotes that, at the request of the task leader, the locations have been added

Table 1. ¹² Results of Tentatively Identified Compounds for BNA in Soil
 WA# 0.098 Pier Drum

Sample Number
 Lab File #

SOLK01395
SPD024

Unit
 Conversion Factor

98/kg
31.9

CAS#	Compound Name	Q	RT	Conc.*
1. 119619	Benzophenone <chem>C14H10O</chem>	89	21.93	1000
2. —	Unknown	—	22.84	410
3. —	Phthalate	—	25.10	230
4. —	Alcohol <chem>C12H22O</chem>	—	30.08	170
5. —	Alkene / Cycloalkane <chem>C12H22</chem>	—	32.16	3300
6. —	Phosphonic Acid derivative	—	34.19	270
7. —	Alcohol <chem>C12H22O</chem>	—	38.83	300
8. —	Unknown	—	38.98	170
9. —	↓	—	40.37	170
10. —	↓	—	42.69	?
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.2 (cont.) Results of Tentatively Identified Compounds for BNA in Soil
 WA# 0-098 Pier Drum

2 2 0004

Sample Number A00642 Unit 18/kg
 Lab File # SPD025 Conversion Factor 41.2

CAS#	Compound Name	Q	RT	Conc.*
1. 100414	Ethyl Benzene C_8H_{10}	97	6.52	580
2. 85449	Phthalic anhydride $C_8H_4O_3$	99	16.65	780
3. -	Cycloalkane C_nH_{2n}	-	19.22	700
4. 119619	Benzophenone $C_{13}H_{10}O$	84	21.94	780
5. -	Cycloalkane C_nH_{2n}	-	22.37	250
6. -	phthalate	-	25.11	250
7. -	Alkane C_nH_{2n+2}	-	30.06	330
8. -	↓	-	31.13	210
9. -	Unknown	-	32.18	2700
10. -	Alkane C_nH_{2n+2}	-	33.15	450
11. -	↓	-	34.11	540
12. -	↓	-	35.03	660
13. -	↓	-	36.03	580
14. -	↓	-	37.19	290
15. -	↓	-	38.52	330
16. -	Unknown	-	39.10	660
17. -	↓	-	40.14	290
18. -	↓	-	40.37	490
19. -	↓	-	42.69	540
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

00068

Table 1. ¹²(cont.) Results of Tentatively Identified Compounds for BNA in Soil
 WA# 0-098 Pier Drum

2 2 3335

Sample Number A00643 Unit ug/kg
 Lab File # SPD 026 Conversion Factor 40.20

CAS#	Compound Name	Q	RT	Conc.*
1. 119619	Benzophenone <chem>C6H10O</chem>	64	21.93	880
2. —	phthalate	—	25.10	320
3. 10544500	Sulfur <chem>S8</chem>	88	27.84	320
4. —	Carboxylic Acid	—	30.07	240
5. —	Unknown	—	32.18	4400
6. —	↓	—	32.80	240
7. —	Alcohol <chem>C6H12O</chem>	—	34.19	240
8. —	Unknown	—	35.05	360
9. —	Alkane <chem>C6H14</chem>	—	36.04	240
10. —	↓	—	38.53	2
11. —	Alcohol <chem>C6H12O</chem>	—	38.80	360
12. —	Unknown	—	38.99	280
13. —	↓	—	39.11	560
14. —	↓	—	40.37	40
15. —	↓	—	42.69	640
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.12 (cont.) Results of Tentatively Identified Compounds for BNA in Soil
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

A00644
SPD 027

Unit
 Conversion Factor

ug/kg
40.6

CAS#	Compound Name	Q	RT	Conc.*
1. 119619	Benzophenone <chem>C13H10O</chem>	75	21.95	2000
2. -	Unknown	-	21.83	200
3. -	Unknown phthalate	-	25.10	280
4. -	Unknown	-	30.06	200
5. -		-	32.16	3800
6. -		-	34.18	200
7. -		-	35.03	200
8. -		-	38.77	410
9. -		-	38.97	240
10. -		-	39.10	490
11. -		-	40.37	240
12. -		-	42.67	570
13. -		-	43.11	530
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.13 Results of the TCLP BNA Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK011995	B00525	B00526	BE00527
FILE :	^PD001	^PD002	^PD003	^PD004
LOCATION :	--	A00642	A00643	A00644
COLLECTED :	--	01/18/95	01/18/95	01/18/95
EXTRACTED :	01/19/95	01/19/95	01/19/95	01/19/95
ANALYZED :	01/27/95	01/27/95	01/27/95	01/27/95
INJECTED :	18:59	19:56	20:54	21:52
MATRIX :	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.3	1.1	1.6
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Phenol	ND	10	ND	13	ND	11	ND	16
bis(-2-Chloroethyl)Ether	ND	10	ND	13	ND	11	ND	16
2-Chlorophenol	ND	10	ND	13	ND	11	ND	16
1,3-Dichlorobenzene	ND	10	ND	13	ND	11	ND	16
1,4-Dichlorobenzene	ND	10	ND	13	ND	11	ND	16
Benzyl alcohol	ND	10	16	13	17	11	15(J)	16
1,2-Dichlorobenzene	ND	10	ND	13	ND	11	ND	16
2-Methylphenol	ND	10	ND	13	ND	11	ND	16
bis(2-Chloroisopropyl)ether	ND	10	ND	13	ND	11	ND	16
4-Methylphenol	ND	10	ND	13	ND	11	ND	16
N-Nitroso-Di-n-propylamine	ND	10	ND	13	ND	11	ND	16
Hexachloroethane	ND	10	ND	13	ND	11	ND	16
Nitrobenzene	ND	10	ND	13	ND	11	ND	16
Isophorone	ND	10	ND	13	ND	11	ND	16
2-Nitrophenol	ND	10	ND	13	ND	11	ND	16
2,4-Dimethylphenol	ND	10	ND	13	ND	11	ND	16
bis(2-Chloroethoxy)methane	ND	10	ND	13	ND	11	ND	16
2,4-Dichlorophenol	ND	10	ND	13	ND	11	ND	16
1,2,4-Trichlorobenzene	ND	10	ND	13	ND	11	ND	16
Naphthalene	ND	10	ND	13	ND	11	ND	16
4-Chloroaniline	ND	10	ND	13	ND	11	ND	16
Hexachlorobutadiene	ND	10	ND	13	ND	11	ND	16
4-Chloro-3-methylphenol	ND	10	ND	13	ND	11	ND	16
2-Methylnaphthalene	ND	10	ND	13	ND	11	ND	16
Hexachlorocyclopentadiene	ND	10	ND	13	ND	11	ND	16
2,4,6-Trichlorophenol	ND	10	ND	13	ND	11	ND	16
2,4,5-Trichlorophenol	ND	50	ND	63	ND	54	ND	82
2-Chloronaphthalene	ND	10	ND	13	ND	11	ND	16
2-Nitroaniline	ND	50	ND	63	ND	54	ND	82
Dimethylphthalate	ND	10	ND	13	ND	11	ND	16
Acenaphthylene	ND	10	ND	13	ND	11	ND	16
3-Nitroaniline	ND	50	ND	63	ND	54	ND	82
Acenaphthene	ND	10	ND	13	ND	11	ND	16
2,4-Dinitrophenol	ND	50	ND	63	ND	54	ND	82

Table 1.13 (Cont) Results of the TCLP BNA Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK011995	B00525	B00526	BE00527
FILE :	^PD001	^PD002	^PD003	^PD004
LOCATION :	--	A00642	A00643	A00644
COLLECTED :	--	01/18/95	01/18/95	01/18/95
EXTRACTED :	01/19/95	01/19/95	01/19/95	01/19/95
ANALYZED :	01/27/95	01/27/95	01/27/95	01/27/95
INJECTED :	18:59	19:56	20:54	21:52
MATRIX :	WATER	WATER	WATER	WATER
DIL. FACT.:	1.0	1.3	1.1	1.6
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
4-Nitrophenol	ND	50	ND	63	ND	54	ND	82
Dibenzofuran	ND	10	ND	13	ND	11	ND	16
2,6-Dinitrotoluene	ND	10	ND	13	ND	11	ND	16
2,4-Dinitrotoluene	ND	10	ND	13	ND	11	ND	16
Diethylphthalate	ND	10	5(J)	13	2(J)	11	ND	16
4-Chlorophenyl-phenylether	ND	10	ND	13	ND	11	ND	16
Fluorene	ND	10	ND	13	ND	11	ND	16
4-Nitroaniline	ND	50	ND	63	ND	54	ND	82
4,6-Dinitro-2-methylphenol	ND	50	ND	63	ND	54	ND	82
N-Nitrosodiphenylamine	ND	10	ND	13	ND	11	ND	16
4-Bromophenyl-phenylether	ND	10	ND	13	ND	11	ND	16
Hexachlorobenzene	ND	10	ND	13	ND	11	ND	16
Pentachlorophenol	ND	50	ND	63	ND	54	ND	82
Phenanthrene	ND	10	ND	13	ND	11	ND	16
Anthracene	ND	10	ND	13	ND	11	ND	16
Carbazole	ND	10	ND	13	ND	11	ND	16
Di-n-butylphthalate	46	10	56(B)	13	45(B)	11	91(B)	16
Fluoranthene	ND	10	ND	13	ND	11	ND	16
Pyrene	ND	10	ND	13	ND	11	ND	16
Butylbenzylphthalate	5(J)	10	ND	13	4(J,B)	11	2(J,B)	16
3,3'-Dichlorobenzidine	ND	50	ND	63	ND	54	ND	82
Benzo(a)anthracene	ND	10	ND	13	ND	11	ND	16
Bis(2-Ethylhexyl)phthalate	11	10	12(J,B)	13	11(B)	11	15(J,B)	16
Chrysene	ND	10	ND	13	ND	11	ND	16
Di-n-octylphthalate	ND	10	ND	13	ND	11	ND	16
Benzo(b)fluoranthene	ND	10	ND	13	ND	11	ND	16
Benzo(k)fluoranthene	ND	10	ND	13	ND	11	ND	16
Benzo(a)pyrene	ND	10	ND	13	ND	11	ND	16
Indeno(1,2,3-cd)pyrene	ND	10	ND	13	ND	11	ND	16
Dibenzo(a,h)anthracene	ND	10	ND	13	ND	11	ND	16
Benzo(g,h,i)perylene	ND	10	ND	13	ND	11	ND	16

Table 1. ¹⁴ Results of Tentatively Identified Compounds for BNA in TCLP
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

WBL011995
SPD001

Unit
 Conversion Factor

μg/L
1.00

CAS#	Compound Name	Q	RT	Conc.*
1. -	unknown	-	31.06	5
2. -	Ethylhexyl diphenyl Phosphoric Acid	-	31.73	8
3.	C ₂₀ H ₂₇ O ₄ P-			
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. ¹⁴(cont.) Results of Tentatively Identified Compounds for BNA in TCLP
 WA# 0-098 Pier Drum

2 1 0308

Sample Number
 Lab File #

B00525
>PD002

Unit
 Conversion Factor

µg/L
1.25

CAS#	Compound Name	Q	RT	Conc.*
1. —	Unknown	—	6.70	8
2. —	↓	—	12.71	16
3. —	Phenyl Butanone <chem>C10H12O</chem>	—	15.22	11
4. —	Carboxylic Acid	—	17.27	10
5. —	Alkene / Cycloalkane <chem>C10H20</chem>	—	19.24	16
6. 599644	Phenol, 4-(1-methyl-1-phenylethyl) <chem>C15H16O</chem>	99	25.13	6
7. —	Carboxylic Acid	—	31.05	8
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.14 (cont.) Results of Tentatively Identified Compounds for BNA in TCLP
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

800526
SPD003

Unit
 Conversion Factor

mg/L
1.00

CAS#	Compound Name	Q	RT	Conc.
1. —	Unknown	—	6.68	5
2. —		—	12.61	10
3. —		—	12.68	9
4. —		—	14.46	5
5. —		—	15.58	5
6. —	↓	—	35.04	5
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

• Estimated Concentration (Response Factor = 1.0)

Table 1.14 (cont.) Results of Tentatively Identified Compounds for BNA in TCLP
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

BE00527
>PD004

Unit
 Conversion Factor

27/L
1.64

CAS#	Compound Name	Q	RT	Conc.
1. —	Unknown	—	71.03	8
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1.15 Results of the BNA in Drum Liquid Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK021495	00912	00913	00914
FILE :	^PD051	^PD054	^PD055	^PD056
LOCATION :	--	REAC #9	REAC #2	REAC #4
COLLECTED :	--	01/10/95	01/10/95	01/10/95
EXTRACTED :	02/14/95	02/14/95	02/14/95	02/14/95
ANALYZED :	02/24/95	02/24/95	02/24/95	02/24/95
INJECTED :	13:18	17:25	18:38	19:55
MATRIX :	WATER	DRUM LIQUID	DRUM LIQUID	DRUM LIQUID
DIL. FACT.:	1.0	595.0	435.0	4.0
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Phenol	ND	10	2186(J)	5950	4354	4350	430	40
bis(-2-Chloroethyl)Ether	ND	10	ND	5950	ND	4350	ND	40
2-Chlorophenol	ND	10	ND	5950	ND	4350	ND	40
1,3-Dichlorobenzene	ND	10	ND	5950	ND	4350	ND	40
1,4-Dichlorobenzene	ND	10	ND	5950	ND	4350	ND	40
Benzyl alcohol	ND	10	4712(J)	5950	1819(J)	4350	3300	40
1,2-Dichlorobenzene	ND	10	ND	5950	ND	4350	ND	40
2-Methylphenol	ND	10	ND	5950	ND	4350	ND	40
bis(2-Chloroisopropyl)ether	ND	10	ND	5950	ND	4350	ND	40
4-Methylphenol	ND	10	ND	5950	ND	4350	24(J)	40
N-Nitroso-Di-n-propylamine	ND	10	ND	5950	ND	4350	ND	40
Hexachloroethane	ND	10	ND	5950	ND	4350	ND	40
Nitrobenzene	ND	10	ND	5950	ND	4350	ND	40
Isophorone	ND	10	ND	5950	ND	4350	ND	40
2-Nitrophenol	ND	10	ND	5950	ND	4350	ND	40
2,4-Dimethylphenol	ND	10	ND	5950	ND	4350	ND	40
bis(2-Chloroethoxy)methane	ND	10	ND	5950	ND	4350	ND	40
2,4-Dichlorophenol	ND	10	ND	5950	ND	4350	ND	40
1,2,4-Trichlorobenzene	ND	10	ND	5950	ND	4350	ND	40
Naphthalene	ND	10	ND	5950	ND	4350	ND	40
4-Chloroaniline	ND	10	ND	5950	ND	4350	ND	40
Hexachlorobutadiene	ND	10	ND	5950	ND	4350	ND	40
4-Chloro-3-methylphenol	ND	10	ND	5950	ND	4350	ND	40
2-Methylnaphthalene	ND	10	ND	5950	ND	4350	ND	40
Hexachlorocyclopentadiene	ND	10	ND	5950	ND	4350	ND	40
2,4,6-Trichlorophenol	ND	10	ND	5950	ND	4350	ND	40
2,4,5-Trichlorophenol	ND	50	ND	29750	ND	21750	ND	200
2-Chloronaphthalene	ND	10	ND	5950	ND	4350	ND	40
2-Nitroaniline	ND	50	ND	29750	ND	21750	ND	200
Dimethylphthalate	ND	10	638(J)	5950	1626(J)	4350	ND	40
Acenaphthylene	ND	10	ND	5950	ND	4350	ND	40
3-Nitroaniline	ND	50	ND	29750	ND	21750	ND	200
Acenaphthene	ND	10	ND	5950	ND	4350	ND	40
2,4-Dinitrophenol	ND	50	ND	29750	ND	21750	ND	200

Table 1.15 (Cont) Results of the BNA in Drum Liquid Analysis
WA # 0-098 Pier Drum

SAMPLE # :	WBLK021495	00912	00913	00914
FILE :	^PD051	^PD054	^PD055	^PD056
LOCATION :	--	REAC #9	REAC #2	REAC #4
COLLECTED :	--	01/10/95	01/10/95	01/10/95
EXTRACTED :	02/14/95	02/14/95	02/14/95	02/14/95
ANALYZED :	02/24/95	02/24/95	02/24/95	02/24/95
INJECTED :	13:18	17:25	18:38	19:55
MATRIX :	WATER	DRUM LIQUID	DRUM LIQUID	DRUM LIQUID
DIL. FACT.:	1.0	595.0	435.0	4.0
UNITS :	ug/L	ug/L	ug/L	ug/L

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
4-Nitrophenol	ND	50	ND	29750	ND	21750	ND	200
Dibenzofuran	ND	10	ND	5950	ND	4350	ND	40
2,6-Dinitrotoluene	ND	10	ND	5950	ND	4350	ND	40
2,4-Dinitrotoluene	ND	10	ND	5950	ND	4350	ND	40
Diethylphthalate	ND	10	ND	5950	ND	4350	ND	40
4-Chlorophenyl-phenylether	ND	10	ND	5950	ND	4350	ND	40
Fluorene	ND	10	ND	5950	ND	4350	ND	40
4-Nitroaniline	ND	50	ND	29750	ND	21750	ND	200
4,6-Dinitro-2-methylphenol	ND	50	ND	29750	ND	21750	ND	200
N-Nitrosodiphenylamine	ND	10	ND	5950	ND	4350	ND	40
4-Bromophenyl-phenylether	ND	10	ND	5950	ND	4350	ND	40
Hexachlorobenzene	ND	10	ND	5950	ND	4350	ND	40
Pentachlorophenol	ND	50	ND	29750	ND	21750	ND	200
Phenanthrene	ND	10	ND	5950	ND	4350	ND	40
Anthracene	ND	10	ND	5950	ND	4350	ND	40
Carbazole	ND	10	ND	5950	ND	4350	ND	40
Di-n-butylphthalate	ND	10	971(J)	5950	955(J)	4350	ND	40
Fluoranthene	ND	10	ND	5950	ND	4350	ND	40
Pyrene	ND	10	ND	5950	ND	4350	ND	40
Butylbenzylphthalate	ND	10	1046(J)	5950	ND	4350	7(J)	40
3,3'-Dichlorobenzidine	ND	50	ND	29750	ND	21750	ND	200
Benzo(a)anthracene	ND	10	ND	5950	ND	4350	ND	40
Bis(2-Ethylhexyl)phthalate	ND	10	7123	5950	6423	4350	11(J)	40
Chrysene	ND	10	ND	5950	ND	4350	ND	40
Di-n-octylphthalate	ND	10	ND	5950	ND	4350	14(J)	40
Benzo(b)fluoranthene	ND	10	ND	5950	ND	4350	ND	40
Benzo(k)fluoranthene	ND	10	ND	5950	ND	4350	ND	40
Benzo(a)pyrene	ND	10	ND	5950	ND	4350	ND	40
Indeno(1,2,3-cd)pyrene	ND	10	ND	5950	ND	4350	ND	40
Dibenzo(a,h)anthracene	ND	10	ND	5950	ND	4350	ND	40
Benzo(g,h,i)perylene	ND	10	ND	5950	ND	4350	ND	40

Table 1.15 (Cont) Results of the BNA in Drum Liquid Analysis
WA # 0-098 Pier Drum

SAMPLE # : 00913 (BOTT)
 FILE : ^PD040
 LOCATION : REAC #2
 COLLECTED : 01/10/95
 EXTRACTED : 02/06/95
 ANALYZED : 02/08/95
 INJECTED : 17:37
 MATRIX : DRUM LIQUID
 DIL. FACT.: 50000
 UNITS : mg/L

COMPOUND	CONC.	MDL
Phenol	ND	500
bis(-2-Chloroethyl)Ether	ND	500
2-Chlorophenol	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
Benzyl alcohol	ND	500
1,2-Dichlorobenzene	ND	500
2-Methylphenol	ND	500
bis(2-Chloroisopropyl)ether	ND	500
4-Methylphenol	ND	500
N-Nitroso-Di-n-propylamine	ND	500
Hexachloroethane	ND	500
Nitrobenzene	ND	500
Isophorone	ND	500
2-Nitrophenol	ND	500
2,4-Dimethylphenol	ND	500
bis(2-Chloroethoxy)methane	ND	500
2,4-Dichlorophenol	ND	500
1,2,4-Trichlorobenzene	ND	500
Naphthalene	ND	500
4-Chloroaniline	ND	500
Hexachlorobutadiene	ND	500
4-Chloro-3-methylphenol	ND	500
2-Methylnaphthalene	ND	500
Hexachlorocyclopentadiene	ND	500
2,4,6-Trichlorophenol	ND	500
2,4,5-Trichlorophenol	ND	2500
2-Chloronaphthalene	ND	500
2-Nitroaniline	ND	2500
Dimethylphthalate	ND	500
Acenaphthylene	ND	500
3-Nitroaniline	ND	2500
Acenaphthene	ND	500
2,4-Dinitrophenol	ND	2500

Table 1.15 (Cont) Results of the BNA in Drum Liquid Analysis
WA # 0-098 Pier Drum

SAMPLE # : 00913 (BOTT)
 FILE : ^PD040
 LOCATION : REAC #2
 COLLECTED : 01/10/95
 EXTRACTED : 02/06/95
 ANALYZED : 02/08/95
 INJECTED : 17:37
 MATRIX : DRUM LIQUID
 DIL. FACT.: 50000
 UNITS : mg/L

COMPOUND	CONC.	MDL
4-Nitrophenol	ND	2500
Dibenzofuran	ND	500
2,6-Dinitrotoluene	ND	500
2,4-Dinitrotoluene	ND	500
Diethylphthalate	ND	500
4-Chlorophenyl-phenylether	ND	500
Fluorene	ND	500
4-Nitroaniline	ND	2500
4,6-Dinitro-2-methylphenol	ND	2500
N-Nitrosodiphenylamine	ND	500
4-Bromophenyl-phenylether	ND	500
Hexachlorobenzene	ND	500
Pentachlorophenol	ND	2500
Phenanthrene	ND	500
Anthracene	ND	500
Carbazole	ND	500
Di-n-butylphthalate	ND	500
Fluoranthene	ND	500
Pyrene	ND	500
Butylbenzylphthalate	ND	500
3,3'-Dichlorobenzidine	ND	2500
Benzo(a)anthracene	ND	500
Bis(2-Ethylhexyl)phthalate	66(J)	500
Chrysene	ND	500
Di-n-octylphthalate	272(J)	500
Benzo(b)fluoranthene	ND	500
Benzo(k)fluoranthene	ND	500
Benzo(a)pyrene	ND	500
Indeno(1,2,3-cd)pyrene	ND	500
Dibenzo(a,h)anthracene	ND	500
Benzo(g,h,i)perylene	ND	500

Table 1.16 Results of Tentatively Identified Compounds for BNA in Drum Lizard
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

WBK021495
>PD051

Unit
 Conversion Factor

ug/L
1.00

CAS#	Compound Name	Q	RT	Conc.*
1.	<i>Name found</i>			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 16(cont.) Results of Tentatively Identified Compounds for BNA in Drum Liquid
 WA# 0-098 Pier Drum

2 2 0040

Sample Number
 Lab File #

00912 10X
>Pd058

Unit
 Conversion Factor

ug/L
5950

CAS#	Compound Name	Q	RT	Conc.*
1. -	Styrene or isomers C_8H_8	-	7.30	710000 71400
2. 100527	Benzaldehyde C_7H_6O	55	9.04	280000
3. -	Unknown	-	12.73	95000
4. -	Benzoic Acid or derivative	-	13.71	48000
5. -	Unknown	-	15.83	48000
6. -	↓	-	15.94	89000
7. 85449	phthalic anhydride $C_8H_4O_3$	99	16.70	190000
8. -	Buten-ane, -phenyl $C_{10}H_{10}O$	-	17.39	110000
9. -	Unknown	-	17.95	210000
10. -	Unknown Benzoic Acid derivatives	-	20.26	150000
11. -	Unknown	-	22.83	30000
12. -	↓	-	25.60	77000
13. -	Unknown phthalate	-	28.01	65000
14. -	↓	-	28.21	60000
15. -	Unknown	-	29.40	95000
16. -	Unknown phthalate	-	30.02	36000
17. -	↓	-	31.90	36000
18. -	Unknown	-	40.03	18000
19. -	↓	-	40.12	24000
20. -	Unknown phthalate	-	43.71	30000
21.				
22.				
23.				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 16 (cont.) Results of Tentatively Identified Compounds for BNA in Drum Liquid
 WA# 0.098 Pier Drum

Sample Number
 Lab File #

00413 10X
ΣP2059

Unit
 Conversion Factor

22 0540
ug/L
4350

CAS#	Compound Name	Q	RT	Conc.*
1. -	Styrene or isomers C_8H_8	-	7.37	570000
2. 100527	Benzaldehyde C_7H_6O	67	9.07	56000
3. -	Unknown	-	12.77	160000
4. -	Carboxylic Acid $C_8H_8O_2$	-	13.04	44000
5. -	Unknown	-	14.29	140000
6. -	↓	-	14.43	17000
7. 85449	phthalic anhydride $C_8H_4O_3$	96	16.79	210000
8. -	Buten-one, phenyl $C_{10}H_{10}O$	-	17.40	15000
9. -	Unknown	-	17.95	81000
10. -	Butadiene, methyl-phenyl $C_{11}H_{12}O_2$	-	20.27	220
11. -	Unknown	-	23.29	61000
12. -		-	23.49	12000
13. -		-	25.60	13000
14. -		-	27.77	7000
15. -		-	29.46	52000
16. -		-	29.73	130000
17. -		-	29.82	13000
18. -		-	40.01	110000
19. -	↓	-	40.12	10000
20. -	Unknown phthalate	-	41.68	130000
21. -				
22. -				
23. -				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 16(cont.) Results of Tentatively Identified Compounds for BNA in Drum Legume
 WA# 0-098 Pier Drum

Sample Number
 Lab File #

00914 10X
>Pd 060

Unit
 Conversion Factor

ug/L
40.0

CAS#	Compound Name	Q	RT	Conc.*
1. —	Styrene or isomers C_8H_8	—	7.24	800
2. —	Unknown	—	7.47	640
3. —	Carboxylic Acid $C_6H_5O_2$	—	13.52 13.52	23000
4. —	Benzoic Acid or derivative	—	14.66	14000
5. 10181 80	Benzeneacetate $C_8H_8O_2$	—	15.64	1700
6. —	Unknown	—	15.97	3800
7. —	↓	—	16.11	280
8. 501520	Benzenepropionic Acid $C_9H_{10}O_2$	44	17.06	440
9. —	Dimethyl Benzoic Acid isomers $C_9H_{10}O_2$	—	17.26	240
10. —	Unknown	—	20.52	440
11. —	↓	—	20.70	280
12. —	↓	—	24.85	1900
13. —	↓	—	25.57	360
14. —	↓	—	28.08	8800
15. —	Carboxylic Acid	—	28.48	6000
16. —	Unknown phthalate	—	28.46	640
17. —	Unknown	—	28.88	600
18. —	↓	—	29.42	1600
19. —	↓	—	30.97	1200
20. —	↓	—	31.06	440
21. —				
22. —				
23. —				

* Estimated Concentration (Response Factor = 1.0)

Table 1. 16(cont.) Results of Tentatively Identified Compounds for BNA in Drum Legend
 WA# 0-098 Pier Drum

2 1 3501

Sample Number 00917 (bottom layer) Unit ug/L
 Lab File # SP0040 Conversion Factor 50.0

CAS#	Compound Name	Q	RT	Conc.*
1. —	Styrene or isomers C_8H_8	—	7.18	76000
2. 100527	Benzaldehyde C_7H_6O	58	9.05	1800
3. —	Unknown	—	9.28	1100 770
4. —	Ethyl Hexanoic Acid $C_8H_{16}O_2$	—	12.83	1600
5. —	Unknown	—	14.30	500
6. —	↓	—	14.44	700 490
7. 85449	Phthalic anhydride $C_8H_4O_3$	99	16.74	6500
8. —	Buten-one, phenyl $C_{10}H_{10}O$	—	17.43	300
9. —	Unknown Benzene derivatives	—	20.27	500
10. —	Unknown	—	23.24	30
11. —		—	23.31	400
12. —		—	23.53	700
13. —		—	25.63	400
14. —		—	27.89	250
15. —		—	29.53	250
16. —		—	29.72	350
17. —		—	40.12	500
18. —		—	40.21	550
19. —		—	40.79	450
20. —	↓	—	43.82	550
21. —				
22. —				
23. —				

* Estimated Concentration (Response Factor = 1.)

Table 1.17 Results of the BNA Analysis for the TCLP Extracts from the Drum Solids
WA # 0-098 Pler Drum

Client ID Location	Blank	00911 Composit 1,8,9,11	00915 REAC #5	00916 Composit 3,7,10,13,14
Compound	Conc (ug/l)	MDL (ug/l)	Conc (ug/l)	MDL (ug/l)
Pyridine	ND	10	ND	20
N-Nitrosodimethylamine	ND	10	ND	20
Aniline	ND	10	ND	20
Bis(2-chloroethyl) ether	ND	10	ND	20
1,3-Dichlorobenzene	ND	10	ND	20
1,4-Dichlorobenzene	ND	10	ND	20
1,2-Dichlorobenzene	ND	10	ND	20
Benzyl alcohol	ND	10	1000	20
Bis(2-chloroisopropyl) ether	ND	10	ND	20
Hexachloroethane	ND	10	ND	20
N-Nitrosodi-n-propylamine	ND	10	ND	20
Nitrobenzene	ND	10	ND	20
Isophorone	ND	10	ND	20
Bis(2-chloroethoxy) methane	ND	10	ND	20
1,2,4-Trichlorobenzene	ND	10	ND	20
Naphthalene	ND	10	ND	20
Benzoic Acid	ND	10	120	20
4-Chloroaniline	ND	10	ND	20
Hexachlorobutadiene	ND	10	ND	20
2-Methylnaphthalene	ND	10	ND	20
Hexachlorocyclopentadiene	ND	10	ND	20
2-Chloronaphthalene	ND	10	ND	20
2-Nitroaniline	ND	10	ND	20
Acenaphthylene	ND	10	ND	20
Dimethyl phthalate	ND	10	ND	20
2,6-Dinitrotoluene	ND	10	ND	20
Acenaphthene	ND	10	ND	20
3-Nitroaniline	ND	10	ND	20
Dibenzofuran	ND	10	ND	20
2,4-Dinitrotoluene	ND	10	ND	20
Fluorene	ND	10	ND	20
Diethylphthalate	ND	10	ND	20
4-Chlorophenyl phenyl ether	ND	10	ND	20
4-Nitroaniline	ND	10	ND	20
N-Nitrosodiphenylamine	ND	10	ND	20
4-Bromophenyl phenyl ether	ND	10	ND	20
Hexachlorobenzene	ND	10	ND	20
Phenanthrene	ND	10	ND	20
Anthracene	ND	10	ND	20
Di-n-butyl phthalate	ND	10	40	20
Fluoranthene	ND	10	ND	20
Benzidine	ND	10	ND	20
Pyrene	ND	10	ND	20
Butyl benzyl phthalate	ND	10	ND	20
Benzo(a)anthracene	ND	10	ND	20
3,3'-Dichlorobenzidine	ND	10	ND	20
Chrysene	ND	10	ND	20
Bis(2-ethylhexyl) phthalate	ND	10	5 J	20
Di-n-octyl phthalate	ND	10	8 J	20
Benzo(b)fluoranthene	ND	10	ND	20
Benzo(k)fluoranthene	ND	10	ND	20
Benzo(a)pyrene	ND	10	ND	20
Indeno(1,2,3-c,d)pyrene	ND	10	ND	20
Dibenzo(a,h)anthracene	ND	10	ND	20
Benzo(ghi)perylene	ND	10	ND	20
Phenol	ND	10	110	20
2-Nitrophenol	ND	10	ND	20
2,4-Dimethylphenol	ND	10	ND	20
2-Chlorophenol	ND	10	ND	20
2,4-Dichlorophenol	ND	10	ND	20
4-Chloro-3-methylphenol	ND	10	ND	20
2,4,6-Trichlorophenol	ND	10	ND	20
2,4-Dinitrophenol	ND	10	ND	20
4,6-Dinitro-2-methylphenol	ND	10	ND	20
4-Nitrophenol	ND	10	ND	20
Pentachlorophenol	ND	10	ND	20
2,4,5-Trichlorophenol	ND	10	ND	20
2-Methylphenol	ND	10	860	20
4-Methylphenol	ND	10	ND	20

Table 1.18 Results of the Pest/PCB Analysis for the Water Samples
WA # 0-098 Pier Drum

2 1 J555

Client ID Location*	WBLK111795		EF 00634 MW-W		EF 00635 MW-S		EF 00636 MW-DUP		EF 00637 MW-E		EF 00638 N Pit	
Analyte	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L	CONC µg/L	MDL µg/L
a-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
g-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
b-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Heptachlor	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
d-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Aldrin	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Heptachlor Epoxide	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
g-Chlordane	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
a-Chlordane	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endosulfan (I)	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
p,p'-DDE	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Dieldrin	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endrin	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
p,p'-DDD	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endosulfan (II)	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
p,p'-DDT	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endrin Aldehyde	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endosulfan Sulfate	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Methoxychlor	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Endrin Ketone	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02
Toxaphene	ND	0.50	ND	0.54	ND	0.52	ND	0.52	ND	0.55	ND	0.54
Aroclor 1016	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27
Aroclor 1221	ND	0.50	ND	0.54	ND	0.52	ND	0.52	ND	0.55	ND	0.54
Aroclor 1232	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27
Aroclor 1242	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27
Aroclor 1248	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27
Aroclor 1254	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27
Aroclor 1260	ND	0.25	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.27

* denotes that, at the request of the task leader, the locations have been added

Table 1.18 (Cont) Results of the Pest/PCB Analysis for the Water Samples
WA # 0-098 Pier Drum

Client ID Location*	EF 00639		EF 00640		EF 00641	
	West Pit (WPit)		Field Blank		MW-N	
	CONC	MDL	CONC	MDL	CONC	MDL
Analyte	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
a-BHC	ND	0.02	ND	0.03	ND	0.02
g-BHC	ND	0.02	ND	0.03	ND	0.02
b-BHC	ND	0.02	ND	0.03	ND	0.02
Heptachlor	ND	0.02	ND	0.03	ND	0.02
d-BHC	ND	0.02	ND	0.03	ND	0.02
Aldrin	ND	0.02	ND	0.03	ND	0.02
Heptachlor Epoxide	ND	0.02	ND	0.03	ND	0.02
g-Chlordane	ND	0.02	ND	0.03	ND	0.02
a-Chlordane	ND	0.02	ND	0.03	ND	0.02
Endosulfan (I)	ND	0.02	ND	0.03	ND	0.02
p,p'-DDE	ND	0.02	ND	0.03	ND	0.02
Dieldrin	ND	0.02	ND	0.03	ND	0.02
Endrin	ND	0.02	ND	0.03	ND	0.02
p,p'-DDD	ND	0.02	ND	0.03	ND	0.02
Endosulfan (II)	ND	0.02	ND	0.03	ND	0.02
p,p'-DDT	ND	0.02	ND	0.03	ND	0.02
Endrin Aldehyde	ND	0.02	ND	0.03	ND	0.02
Endosulfan Sulfate	ND	0.02	ND	0.03	ND	0.02
Methoxychlor	ND	0.02	ND	0.03	ND	0.02
Endrin Ketone	ND	0.02	ND	0.03	ND	0.02
Toxaphene	ND	0.52	ND	0.79	ND	0.54
Aroclor 1016	ND	0.26	ND	0.40	ND	0.27
Aroclor 1221	ND	0.52	ND	0.79	ND	0.54
Aroclor 1232	ND	0.26	ND	0.40	ND	0.27
Aroclor 1242	ND	0.26	ND	0.40	ND	0.27
Aroclor 1248	ND	0.26	ND	0.40	ND	0.27
Aroclor 1254	ND	0.26	ND	0.40	ND	0.27
Aroclor 1260	ND	0.26	ND	0.40	ND	0.27

* denotes that, at the request of the task leader, the locations have been added

00088

Table 1.19 Results of the Pest/PCB Analysis for the Soil Samples
WA # 0-098 Pier Drum
Based on Dry weight

Client ID Location * % Solid	SBLK011395		A00643 Sed N 83		A00644 Sed E 82		SBLK020795		A00642 Sed S 81	
	100	MDL	MDL	MDL	MDL	MDL	100	MDL	MDL	MDL
Analyte	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
a-BHC	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
g-BHC	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
b-BHC	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Heptachlor	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
d-BHC	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Aldrin	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Heptachlor Epoxide	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
g-Chlordane	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
a-Chlordane	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endosulfan (I)	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
p,p'-D D E	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Dieldrin	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endrin	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
p,p'-D D D	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endosulfan (II)	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
p,p'-D D T	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endrin Aldehyde	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endosulfan Sulfate	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Methoxychlor	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Endrin Ketone	ND	3.3	ND	4.0	ND	4.1	ND	33	ND	41
Toxaphene	ND	83	ND	100	ND	100	ND	830	ND	1000
Aroclor 1016	ND	42	ND	50	ND	51	ND	420	ND	510
Aroclor 1221	ND	83	ND	100	ND	100	ND	830	ND	1000
Aroclor 1232	ND	42	ND	50	ND	51	ND	420	ND	510
Aroclor 1242	ND	42	ND	50	ND	51	ND	420	ND	510
Aroclor 1248	ND	42	ND	50	ND	51	ND	420	ND	510
Aroclor 1254	ND	42	ND	50	ND	51	ND	420	ND	510
Aroclor 1260	ND	42	ND	50	ND	51	ND	420	ND	510

* at the request of the Task Leader, the actual locations have been added

Table 1.20 Results of the TCLP Pest/PCB Analysis
WA # 0-098 Pier Drum

Client ID Location*	WBLK011995		C 00525 A 00642		C 00526 A 00643		CF 00527 A 00644	
Analyte	MDL μg/L	MDL μg/L	MDL μg/L	MDL μg/L	MDL μg/L	MDL μg/L	MDL μg/L	MDL μg/L
a-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.04
g-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.04
b-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Heptachlor	ND	0.02	ND	0.02	ND	0.02	ND	0.04
d-BHC	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Aldrin	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Heptachlor Epoxide	ND	0.02	ND	0.02	ND	0.02	ND	0.04
g-Chlordane	ND	0.02	ND	0.02	ND	0.02	ND	0.04
a-Chlordane	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endosulfan (I)	ND	0.02	ND	0.02	ND	0.02	ND	0.04
p,p'-D D E	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Dieldrin	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endrin	ND	0.02	ND	0.02	ND	0.02	ND	0.04
p,p'-D D D	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endosulfan (II)	ND	0.02	ND	0.02	ND	0.02	ND	0.04
p,p'-D D T	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endrin Aldehyde	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endosulfan Sulfate	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Methoxychlor	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Endrin Ketone	ND	0.02	ND	0.02	ND	0.02	ND	0.04
Toxaphene	ND	0.50	ND	0.60	ND	0.55	ND	0.88
Aroclor 1016	ND	0.25	ND	0.30	ND	0.27	ND	0.44
Aroclor 1221	ND	0.50	ND	0.60	ND	0.55	ND	0.88
Aroclor 1232	ND	0.25	ND	0.30	ND	0.27	ND	0.44
Aroclor 1242	ND	0.25	ND	0.30	ND	0.27	ND	0.44
Aroclor 1248	ND	0.25	ND	0.30	ND	0.27	ND	0.44
Aroclor 1254	ND	0.25	ND	0.30	ND	0.27	ND	0.44
Aroclor 1260	ND	0.25	ND	0.30	ND	0.27	ND	0.44

* denotes that, at the request of the task leader, the locations have been added

Table 1.21 Results of the Pest/PCB Analysis in Drum Liquid Samples
WA # 0-098 Pier Drum

Client ID	WBLK020795		00912		00913 Top layer		00913 Bottom layer		00914	
Location	-		Reac#9		Reac#2		Reac#2		Reac#4	
Analyte	µg/L	MDL µg/L	µg/L	MDL µg/L	µg/L	MDL µg/L	µg/L	MDL µg/L	µg/L	MDL µg/L
a-BHC	ND	0.02	0.16	0.11	ND	0.11	ND	1000	ND	0.11
g-BHC	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
b-BHC	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Heptachlor	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
d-BHC	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Aldrin	ND	0.02	ND	0.11	0.18	0.11	ND	1000	ND	0.11
Heptachlor Epoxide	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
g-Chlordane	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
a-Chlordane	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endosulfan (I)	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
p,p'-DDE	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Dieldrin	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endrin	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
p,p'-DDD	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endosulfan (II)	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
p,p'-DDT	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endrin Aldehyde	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endosulfan Sulfate	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Methoxychlor	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Endrin Ketone	ND	0.02	ND	0.11	ND	0.11	ND	1000	ND	0.11
Toxaphene	ND	0.50	ND	2.80	ND	2.80	ND	25000	ND	2.80
Aroclor 1016	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40
Aroclor 1221	ND	0.50	ND	2.80	ND	2.80	ND	25000	ND	2.80
Aroclor 1232	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40
Aroclor 1242	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40
Aroclor 1248	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40
Aroclor 1254	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40
Aroclor 1260	ND	0.25	ND	1.40	ND	1.40	ND	13000	ND	1.40

Table 1.22 Results of the Pest/PCB Analysis in Drum Solid Samples
WA # 0-098 Pier Drum

Client ID Location*			00911 Composit 1, 8, 9, 11		00915 REAC #5		00916 Composit 3, 7, 10, 13, 14	
	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
Analyte								
Aldrin	ND	0.10	ND	0.18	ND	0.11	ND	0.25
a-BHC	ND	0.10	ND	0.18	ND	0.11	ND	0.25
b-BHC	ND	0.10	ND	0.18	ND	0.11	ND	0.25
g-BHC	ND	0.10	ND	0.18	ND	0.11	ND	0.25
d-BHC	ND	0.10	0.60	0.18	ND	0.11	ND	0.25
a-Chlordane	ND	0.10	ND	0.18	ND	0.11	ND	0.25
g-Chlordane	ND	0.10	ND	0.18	ND	0.11	ND	0.25
p,p'-D D D	ND	0.10	ND	0.18	ND	0.11	ND	0.25
p,p'-D D E	ND	0.10	ND	0.18	ND	0.11	ND	0.25
p,p'-D D T	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Dieldrin	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Endosulfan (alpha)	ND	0.10	ND	0.18	ND	0.11	1.0	0.25
Endosulfan (beta)	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Endosulfan Sulfate	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Endrin	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Endrin Aldehyde	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Endrin Ketone	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Heptachlor	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Heptachlor Epoxide	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Methoxychlor	ND	0.10	ND	0.18	ND	0.11	ND	0.25
Toxaphene	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1016	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1221	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1232	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1242	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1248	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1254	ND	1.00	ND	1.8	ND	1.1	ND	2.5
Aroclor 1260	ND	1.00	ND	1.8	ND	1.1	ND	2.5

* at the request of the Task Leader, the actual locations have been added

Table 1.23 Results of the Metals Analysis for the Water Samples
WA # 0-098 Pier Drum

2 2 3389

Client ID Location		Method Blank Lab		A00636 Unfiltered		B00636 Filtered		A00638 Unfiltered		B00638 Filtered		A00641 Unfiltered	
Parameter	Analysis Method	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	ICAP	ND	40	1200	40	1000	40	2300	40	870	40	16000	40
Antimony	AA-Fur	ND	5.6	ND	5.6	ND	5.6	ND	5.6	ND	5.6	ND	5.6
Arsenic	AA-Fur	ND	2.2	3.5	2.2	3.3	2.2	30	2.2	29	2.2	12	2.2
Barium	ICAP	ND	4.0	18	4.0	17	4.0	20	4.0	10	4.0	44	4.0
Beryllium	ICAP	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0
Cadmium	AA-Fur	ND	0.22	ND	0.22	ND	0.22	ND	0.22	ND	0.22	ND	0.22
Calcium	ICAP	ND	100	4000	100	4000	100	17000	100	16000	100	2300	100
Chromium	AA-Fur	ND	2.8	ND	2.8	ND	2.8	8.6	2.8	4.5	2.8	16	2.8
Cobalt	ICAP	ND	6.0	ND	6.0	ND	6.0	ND	6.0	ND	6.0	ND	6.0
Copper	ICAP	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0
Iron	ICAP	ND	10	9400	10	9100	10	950	10	580	10	4100	10
Lead	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	3.0	2.2
Magnesium	ICAP	ND	500	4200	500	4100	500	6500	500	5800	500	1400	500
Manganese	ICAP	ND	2.0	4.0	2.0	3.0	2.0	18	2.0	13	2.0	5.0	2.0
Mercury	Cold Vapor	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Nickel	ICAP	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10
Potassium	ICAP	ND	2000	ND	2000	ND	2000	4900	2000	4400	2000	ND	2000
Selenium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Silver	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Sodium	ICAP	ND	500	29000	500	29000	500	25000	500	23000	500	3800	500
Thallium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Vanadium	ICAP	ND	5.0	ND	5.0	ND	5.0	7.0	5.0	ND	5.0	25	5.0
Zinc	ICAP	ND	5.0	ND	5.0	ND	5.0	27	5.0	25	5.0	ND	5.0

Table 1.23 (Cont) Results of the Metals Analysis for the Water Samples
WA # 0-098 Pier Drum

2 7 03 0

Client ID		B00641		A00635		B00635		A00639		B00639		A00640	
Location		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Parameter	Analysis Method	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	ICAP	3400	40	1400	40	1100	40	2000	40	1400	40	ND	40
Antimony	AA-Fur	ND	5.6	ND	5.6	ND	5.6	ND	5.6	ND	5.6	ND	5.6
Arsenic	AA-Fur	10	2.2	3.0	2.2	2.8	2.2	10	2.2	9.6	2.2	ND	2.2
Barium	ICAP	4.0	4.0	18	4.0	17	4.0	9.0	4.0	7.0	4.0	ND	4.0
Beryllium	ICAP	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0
Cadmium	AA-Fur	ND	0.22	ND	0.22	ND	0.22	ND	0.22	ND	0.22	ND	0.22
Calcium	ICAP	1700	100	4100	100	4100	100	12000	100	9800	100	ND	100
Chromium	AA-Fur	ND	2.8	ND	2.8	ND	2.8	3.6	2.8	2.9	2.8	ND	2.8
Cobalt	ICAP	ND	6.0	ND	6.0	ND	6.0	ND	6.0	ND	6.0	ND	6.0
Copper	ICAP	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0
Iron	ICAP	1700	10	9200	10	9200	10	1600	10	1100	10	ND	10
Lead	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Magnesium	ICAP	870	500	4300	500	4200	500	4600	500	3600	500	ND	500
Manganese	ICAP	ND	2.0	3.0	2.0	3.0	2.0	26	2.0	21	2.0	ND	2.0
Mercury	Cold Vapor	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Nickel	ICAP	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10
Potassium	ICAP	ND	2000	ND	2000	ND	2000	2300	2000	ND	2000	ND	2000
Selenium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Silver	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Sodium	ICAP	3000	500	30000	500	30000	500	30000	500	23000	500	ND	500
Thallium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Vanadium	ICAP	9.0	5.0	ND	5.0	ND	5.0	8.0	5.0	6.0	5.0	ND	5.0
Zinc	ICAP	ND	5.0	ND	5.0	ND	5.0	56	5.0	45	5.0	ND	5.0

Table 1.23 (Cont) Results of the Metals Analysis for the Water Samples
WA # 0-098 Pier Drum

Client ID Location		B00640 Filtered		A00634 Unfiltered		B00634 Filtered		A00637 Unfiltered		B00637 Filtered	
Parameter	Analysis Method	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l
Aluminum	ICAP	ND	40	7400	40	3500	40	10000	40	4100	40
Antimony	AA-Fur	ND	5.6	ND	5.6	ND	5.6	ND	5.6	ND	5.6
Arsenic	AA-Fur	ND	2.2	10	2.2	10	2.2	19	2.2	15	2.2
Barium	ICAP	ND	4.0	30	4.0	10	4.0	39	4.0	9.0	4.0
Beryllium	ICAP	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0
Cadmium	AA-Fur	ND	0.22	ND	0.22	ND	0.22	ND	0.22	ND	0.22
Calcium	ICAP	ND	100	27000	100	28000	100	5800	100	6000	100
Chromium	AA-Fur	ND	2.8	7.6	2.8	3.8	2.8	13	2.8	3.5	2.8
Cobalt	ICAP	ND	6.0	ND	6.0	ND	6.0	ND	6.0	ND	6.0
Copper	ICAP	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0
Iron	ICAP	ND	10	6600	10	5800	10	4500	10	3600	10
Lead	AA-Fur	ND	2.2	ND	2.2	ND	2.2	3.2	2.2	ND	2.2
Magnesium	ICAP	ND	500	13000	500	13000	500	5800	500	5600	500
Manganese	ICAP	ND	2.0	6.0	2.0	3.0	2.0	8.0	2.0	5.0	2.0
Mercury	Cold Vapor	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Nickel	ICAP	ND	10	ND	10	ND	10	ND	10	ND	10
Potassium	ICAP	ND	2000	2100	2000	ND	2000	ND	2000	ND	2000
Selenium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Silver	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Sodium	ICAP	ND	500	75000	500	76000	500	40000	500	40000	500
Thallium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Vanadium	ICAP	ND	5.0	12	5.0	7.0	5.0	11	5.0	ND	5.0
Zinc	ICAP	ND	5.0	ND	5.0	5.0	5.0	ND	5.0	ND	5.0

Table 1.24 Results of the Metals Analysis for the Soil Samples
WA # 0-098 Pier Drum
Based on Dry Weight

Client ID Location		Method Blank		A00642		A00643		A00644	
		Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Parameter	Analysis Method								
Aluminum	ICAP	ND	10	660	9.4	470	8.9	330	9.3
Antimony	AA-Fur	ND	1.0	ND	0.84	ND	0.89	ND	0.83
Arsenic	AA-Fur	ND	0.50	ND	0.42	ND	0.45	ND	0.42
Barium	ICAP	ND	4.0	4.7	3.8	3.6	3.6	ND	3.7
Beryllium	ICAP	ND	0.2	ND	0.2	ND	0.2	ND	0.2
Cadmium	ICAP	ND	0.3	ND	0.3	ND	0.3	ND	0.3
Calcium	ICAP	ND	50	290	47	94	45	61	47
Chromium	ICAP	ND	0.8	1.4	0.8	ND	0.7	ND	0.7
Cobalt	ICAP	ND	2.0	ND	1.9	ND	1.8	ND	1.9
Copper	ICAP	ND	0.6	ND	0.6	ND	0.5	ND	0.6
Iron	ICAP	ND	9.0	200	8.4	150	8.0	43	8.4
Lead	ICAP	ND	4.0	ND	3.8	ND	3.6	ND	3.7
Magnesium	ICAP	ND	50	ND	47	ND	45	ND	47
Manganese	ICAP	ND	1.4	ND	1.3	ND	1.3	ND	1.3
Mercury	Cold Vapor	ND	0.04	ND	0.03	ND	0.03	ND	0.04
Nickel	ICAP	ND	2.0	ND	1.9	ND	1.8	ND	1.9
Potassium	ICAP	ND	200	ND	190	ND	180	ND	190
Selenium	AA-Fur	ND	0.50	ND	0.42	ND	0.45	ND	0.42
Silver	ICAP	ND	0.5	ND	0.5	ND	0.4	ND	0.5
Sodium	ICAP	ND	50	69	47	63	45	93	47
Thallium	AA-Fur	ND	0.50	ND	0.42	ND	0.45	ND	0.42
Vanadium	ICAP	ND	2.0	ND	1.9	ND	1.8	ND	1.9
Zinc	ICAP	ND	2.0	5.4	1.9	ND	1.8	3.4	1.9

Table 1.25 Results of the TCLP Metals Analysis
WA # 0-096 Pier Drum

Client ID Location		Method Blank Lab		A00525 A00642		A00526 A00643		A, D00527 A00644	
Parameter	Analysis Method	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l
Arsenic	AA-Fur	ND	2.2	6.3	2.2	ND	2.2	ND	2.2
Barium	ICAP	ND	4.0	930	4.0	28	4.0	11	4.0
Cadmium	ICAP	ND	3.0	ND	3.0	ND	3.0	ND	3.0
Chromium	ICAP	ND	5.0	8.0	5.0	ND	5.0	ND	5.0
Lead	AA-Fur	ND	2.2	3.2	2.2	ND	2.2	ND	2.2
Mercury	Cold Vapor	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Selenium	AA-Fur	ND	2.2	ND	2.2	ND	2.2	ND	2.2
Silver	ICAP	ND	10	ND	10	ND	10	ND	10

Table 1.26 Results of the Metals Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

Client ID Location		Method Blank Lab		00912 Reac#9		00913 Reac#2		00914 Reac#4	
Parameter	Analysis Method	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l	Conc ug/l	MDL ug/l
Aluminum	ICAP	ND	50	690	100	ND	100	25000	100
Antimony	AA-Fur	ND	5.0	ND	10	ND	10	ND	10
Arsenic	AA-Fur	ND	5.0	ND	10	ND	10	22	10
Barium	ICAP	ND	5.0	29	10	23	10	240	10
Beryllium	ICAP	ND	2.0	ND	4.0	ND	4.0	ND	4.0
Cadmium	ICAP	ND	2.0	7.0	4.0	34	4.0	ND	4.0
Calcium	ICAP	ND	100	410*	0.20 *	400*	0.20 *	37*	0.20 *
Chromium	ICAP	ND	5.0	80	10	120	10	47	10
Cobalt	ICAP	ND	5.0	7300	10	40000	10	900	10
Copper	ICAP	ND	5.0	520	10	150	10	660	10
Iron	ICAP	ND	25	18*	0.05 *	360*	0.05 *	310*	0.05 *
Lead	AA-Fur	ND	5.0	61	10	1200	10	38	10
Magnesium	ICAP	ND	500	8000	1000	8000	1000	10000	1000
Manganese	ICAP	ND	2.0	3000	4.0	5700	4.0	1500	4.0
Nickel	ICAP	ND	10	66	20	850	20	30	20
Potassium	ICAP	ND	2000	12000	4000	35000	4000	12000	4000
Selenium	AA-Fur	ND	5.0	ND	10	ND	10	ND	10
Silver	ICAP	ND	5.0	ND	10	ND	10	ND	10
Sodium	ICAP	ND	500	21000	1000	71000	1000	29000	1000
Thallium	AA-Fur	ND	5.0	ND	10	ND	10	ND	10
Vanadium	ICAP	ND	5.0	ND	10	ND	10	32	10
Zinc	ICAP	ND	5.0	1900	10	3600	10	330	10

* denotes that the units for this value is milligram per liter

Mercury analysis were not performed due to insufficient sample size

Table 1.27 Results of the Metals Analysis in TCLP Extracts from the Drum Solids
WA # 0-098 Pier Drum

2 2 3385

Client ID Location	Method Blank		00911 Composit 1, 8, 9, 11		00915 REAC #5		00916 Composit 3, 7, 10, 13, 14	
Parameter	Conc (ug/l)	MDL (ug/l)	Conc (ug/l)	MDL (ug/l)	Conc (ug/l)	MDL (ug/l)	Conc (ug/l)	MDL (ug/l)
Aluminum	ND	3000	ND	3000	ND	3000	ND	3000
Antimony	ND	10.0	ND	10.0	ND	10.0	ND	10.0
Arsenic	ND	8.0	ND	8.0	ND	8.0	ND	8.0
Barium	ND	1000	ND	1000	ND	1000	ND	1000
Beryllium	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Cadmium	ND	4.0	167	80	ND	4.0	ND	4.0
Calcium	ND	250	435000	25000	2800	250	1290	250
Chromium	ND	100	ND	100.0	ND	100.0	ND	100.0
Cobalt	ND	250	470	250	ND	250	ND	250
Copper	ND	50.0	ND	50.0	ND	50.0	50	50.0
Iron	ND	200	2190	200	ND	200	760	200
Lead	ND	5.0	102	20	7.9	5.0	6.1	5.0
Magnesium	ND	50.0	4300	500	300	50.0	170	50.0
Manganese	ND	100	350	100	ND	100	ND	100
Mercury	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Nickel	ND	100	ND	100	ND	100	ND	100
Potassium	ND	100	4200	1000	1580	100	570	100
Selenium	ND	10.0	ND	10.0	ND	10.0	ND	10.0
Silver	ND	50.0	ND	50.0	ND	50.0	ND	50.0
Sodium	ND	50.0	3100000	500000	2300000	500000	1800000	500000
Thallium	ND	10.0	ND	10.0	ND	10.0	ND	10.0
Vanadium	ND	3000	ND	3000	ND	3000	ND	3000
Zinc	ND	50.0	440	50.0	210	50.0	130	50.0

Table 1.28 Results of the Wet Chemistry Analysis
WA # 0-098 Pier Drum

Sample ID	Location	Analysis	Units	Result	MDL
00912	REAC #9	BTU	BTU/lb	3379	50
00912	REAC #9	Ash	Percent	0.2	0.1
00912	REAC #9	Cl	Percent	0.33	0.001
00912	REAC #9	S	Percent	ND	0.1
00912	REAC #9	Water	Percent	53	1
00913	REAC #2	BTU	BTU/lb	5470	50
00913	REAC #2	Ash	Percent	0.26	0.1
00913	REAC #2	Cl	Percent	0.34	0.001
00913	REAC #2	S	Percent	ND	0.1
00913	REAC #2	Water	Percent	47	1
00914	REAC #4	BTU	BTU/lb	ND	50
00914	REAC #4	Ash	Percent	ND	0.1
00914	REAC #4	Cl	Percent	0.44	0.001
00914	REAC #4	S	Percent	0.10	0.1
00914	REAC #4	Water	Percent	89.6	1

QA/QC FOR VOA

Before extraction, each sample was spiked with a three component mixture of CLP surrogate standards consisting of toluene-d₈, 4-bromofluorobenzene and 1,2-dichloroethane-d₄. The surrogate percent recoveries for the water samples, listed in Table 2.1, ranged from 90 to 102. All forty-five values were within the acceptable QC limits.

The internal standard areas (for bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d₃) for the water samples are also listed in Table 2.1. All forty-five areas are within acceptable QC limits.

Sample 00635 was chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, ranging from 94 to 110, are listed in Table 2.2. All ten values were within the acceptable QC limits. The relative percent differences (RPDs), also listed in Table 2.2, ranged from 0 (zero) to five, and all five were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.3, ranged from 86 to 105. All twenty-four values were within acceptable QC limits.

The internal standard areas for the soil samples are also listed in Table 2.3. All twenty-four areas are within the acceptable QC limits.

Sample 00642 was chosen for the MS/MSD analyses for the soil samples. The percent recoveries, ranging from 99 to 106, are listed in Table 2.4. All ten values were within the acceptable QC limits. The RPDs, also listed in Table 2.4, ranged from 1 to 3, and all five were within the acceptable QC limits.

The surrogate percent recoveries for the drum liquid samples, listed in Table 2.5, ranged from 93 to 105. All thirty-six values were within acceptable QC limits.

The internal standard areas for the drum liquid samples are also listed in Table 2.5. All thirty-six areas are within the acceptable QC limits.

Sample 00914 was chosen for the MS/MSD analyses for the drum liquid samples. The percent recoveries, ranging from 89 to 106, are listed in Table 2.6. All ten values were within the acceptable QC limits. The RPDs, also listed in Table 2.6, ranged from 0 (zero) to 8, and all five were within the acceptable QC limits.

The initial calibrations are listed in Table 2.7.

The continuing calibrations are listed in Table 2.8.

The samples and calibrations are correlated in Table 2.9.

The surrogate percent recoveries for the TCLP samples, listed in Table 2.10, ranged from 98 to 115. Nineteen out of twenty-one values were within the acceptable QC limits.

The internal standard areas for the TCLP samples are listed in Table 2.11. All eighteen areas are within the acceptable QC limits.

Non-REAC sample 95-01-227-1 was chosen for the MS/MSD analyses for the TCLP samples. The percent recoveries, ranging from 64 to 86, are listed in Table 2.12. All ten values were within the acceptable QC limits. The RPDs, also listed in Table 2.12, ranged from 0 (zero) to 6, and all five were within the acceptable QC limits.

The surrogate percent recoveries for the TCLP extracts of the drum solid samples, listed in Table 2.13, ranged from 79 to 111. All twenty-one values were within the acceptable QC limits.

The internal standard areas for the TCLP extracts of the drum solid samples are listed in Table 2.14. All twenty-four values are within the acceptable QC limits.

The blank spike percent recoveries, listed in Table 2.15, ranged from 90 to 140. Four out of five values are within the acceptable QC limits.

Sample 00911 was chosen for the MS/MSD analyses for the TCLP extracts from the drum solid samples. The percent recoveries, ranging from 97 to 115, are listed in Table 2.16. All ten values were within the acceptable QC limits. The RPDs, also listed in Table 2.16, ranged from 1 to 4, and all five values were within the acceptable QC limits.

Table 2.1 Results of the Internal Standard Areas and Surrogate Recoveries for the Water Samples
WA # 0-098 Pier Drum

CAL CHECK	Sample # 50 PPB VOC	Data File >V2425	Internal Standards			Surrogates		
			1 area 76546	2 area 321010	3 area 270346	DIC % NA	TOL % NA	BRO % NA
LAB BLANK-01/13/95		>V2426	75692	314945	273790	94	97	99
	00645	>V2427	76089	320731	284218	96	99	99
	00638	>V2430	73332	306255	275550	98	97	99
	000635MS	>V2436	74683	305104	261234	100	101	102
	00635MSD	>V2437	69724	284515	244748	102	101	99
CAL CHECK	50 PPB VOC	>V2440	71286	311633	263301	NA	NA	NA
LAB BLANK-01/14/95		>V2441	71588	316662	268936	90	99	95
	00640	>V2443	71161	302822	264733	99	97	99
CAL CHECK	50 PPB VOC	>V2467	69611	297158	256657	NA	NA	NA
LAB BLANK-01/17/95		>V2472	69211	297347	253604	96	97	97
	00636	>V2473	70573	300017	255424	95	99	96
	00641	>V2474	66183	276961	240465	96	97	95
	00635	>V2475	70963	303151	259143	96	97	97
	00634	>V2477	69445	295544	248081	95	98	98
	00637	>V2478	65921	286093	242340	96	98	96
CAL CHECK	50 PPB VOC	>V2480	71158	302551	252071	NA	NA	NA
LAB BLANK-01/18/95		>V2481	67422	286726	249867	97	97	95
	00639	>V2483	64568	288469	242881	97	98	94

SURROGATE LIMITS

WATER

S1 (DIC) = 1,2-Dichloroethane-d4 (76-114)
S2 (TOL) = Toluene-d8 (88-110)
S3 (BRO) = Bromofluorobenzene (86-115)

Table 2.2 Results of the MS/MSD Analysis for the Water Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: 00635

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0.00	47.23	94	61-145
Trichloroethene	50.00	0.00	53.89	108	71-120
Benzene	50.00	0.00	51.18	102	76-127
Toluene	50.00	0.00	49.45	99	76-125
Chlorobenzene	50.00	0.00	49.49	99	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	50.00	49.55	99	5	14 61-145
Trichloroethene	50.00	55.21	110	2	14 71-120
Benzene	50.00	53.41	107	5	11 76-127
Toluene	50.00	51.35	103	4	13 76-125
Chlorobenzene	50.00	49.61	99	0	13 75-130

Table 2.3 Results of the Internal Standard Areas and Surrogate Recoveries for the Soil Samples
WA # 0-098 Pier Drum

	Sample #	Data File	Internal Standards			Surrogates		
			1 area	2 area	3 area	DIC %	TOL %	BRO %
CAL CHECK	50 PPB VOC	>V2440	71286	311633	263301	NA	NA	NA
SAND BLANK-01/14/95		>V2442	58256	239724	216206	95	98	99
	00643	>V2451	62773	273702	209206	99	98	97
	00644	>V2452	62044	269343	222593	101	98	97
	00642MS	>V2453	60492	257058	203472	103	102	96
	00642MSD	>V2454	60973	259847	206304	104	105	98

CAL CHECK	50 PPB VOC	>V2459	72261	306490	262689	NA	NA	NA
SAND BLANK-01/17/95		>V2460	57591	245235	206015	95	99	95
	00642	>V2461	61869	268131	221075	95	103	86
(1:5 DIL)_	00642	>V2462	67440	295631	250991	98	99	95

SURROGATE LIMITS SOIL

S1 (DIC) = 1,2-Dichloroethane-d4 (70-121)
 S2 (TOL) = Toluene-d8 (81-117)
 S3 (BRO) = Bromofluorobenzene (74-121)

Table 2.4 Results of the MS/MSD Analysis for the Soil Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: 00642

Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	63.29	0.00	62.62	99	59-172
Trichloroethene	63.29	0.00	66.34	105	62-137
Benzene	63.29	0.00	64.91	103	66-142
Toluene	63.29	11.90	76.92	103	59-139
Chlorobenzene	63.29	0.00	62.87	99	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	63.29	63.75	101	1	22 59-172
Trichloroethene	63.29	67.16	106	1	24 62-137
Benzene	63.29	64.01	101	2	21 66-142
Toluene	63.29	75.42	100	3	21 59-139
Chlorobenzene	63.29	63.24	100	1	21 60-133

Table 2.5 Results of the Internal Standard Areas and Surrogate Recoveries for the Drum Liquid Samples
WA # 0-098 Pier Drum

CAL CHECK	Sample #	Data File	Internal Standards			Surrogates		
			1 area	2 area	3 area	DIC %	TOL %	BRO %
	50 PPB VOC	>V2618	51926	217627	180758	NA	NA	NA
LAB BLANK-01/30/95		>V2619	49694	215774	182052	101	98	98
	00914	>V2620	51010	225513	188614	100	98	98
	00912	>V2621	48851	220310	178397	103	99	98
	00913	>V2622	48472	212162	180851	101	96	96
	00914MS	>V2624	49468	219840	177481	105	101	101
	00914MSD	>V2625	50118	224368	178615	103	102	100
CAL CHECK	50 PPB VOC	>V2628	52187	222379	187140	NA	NA	NA
LAB BLANK-01/31/95		>V2629	52983	215667	194137	96	98	97
500000DL	00912	>V2631	45750	216746	179827	97	100	95
500000DL	00913	>V2632	47964	218820	182803	98	99	97
20DL	00914	>V2633	49769	219375	183169	95	99	96
100000DL	00912	>V2634	42135	223211	163060	97	101	93
250000DL	00913	>V2635	47524	211477	178429	97	100	96

SURROGATE LIMITS

WATER

S1 (DIC) = 1,2-Dichloroethane-d4 (76-114)
 S2 (TOL) = Toluene-d8 (88-110)
 S3 (BRO) = Bromofluorobenzene (86-115)

Table 2.6 Results of the MS/MSD Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: 00914

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0.00	52.49	105	61-145
Trichloroethene	50.00	0.00	47.87	96	71-120
Benzene	50.00	0.00	52.07	104	76-127
Toluene	50.00	9.58	60.66	102	76-125
Chlorobenzene	50.00	0.00	50.42	101	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	50.00	52.65	105	0	14 61-145
Trichloroethene	50.00	44.67	89	8	14 71-120
Benzene	50.00	53.11	106	2	11 76-127
Toluene	50.00	61.56	104	2	13 76-125
Chlorobenzene	50.00	51.29	103	2	13 75-130

Table 2.7 Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: GCMSD-2(3034A12982)
Calibration Date: 01/18/95

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Compound	Laboratory ID: >V2465 >V2466 >V2467 >V2468 >V2469 >V2470						RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF	RF					
	5.00	20.00	50.00	100.00	150.00	200.00					
Dichlorodifluoromethane	2.80941	2.50632	2.34395	2.33993	2.18946	2.27145	.233	2.41009	9.202		
Chloromethane	1.19518	1.08970	1.01155	1.01467	.95931	1.00117	.259	1.04526	8.101		**
Vinyl Chloride	1.19594	1.08058	1.01077	1.00967	.95248	.97627	.273	1.03762	8.558	*	
Bromomethane	1.52096	1.19411	1.09332	.91927	.83452	.88147	.329	1.07394	24.028		
Chloroethane	.78867	.73370	.68360	.65068	.41482	.42918	.348	.61678	25.617		
Trichlorofluoromethane	4.37044	3.86030	3.68695	3.70158	3.45548	3.57984	.401	3.77576	8.501		
Acetone	.57416	.48424	.46921	.43028	.43098	.42623	.496	.46918	12.081		
1,1-Dichloroethene	1.57402	1.38744	1.33171	1.30759	1.21965	1.26641	.515	1.34780	9.247	*	
Carbon Disulfide	3.34714	3.13399	3.12541	3.19138	3.03479	3.15376	.588	3.16441	3.268		
Methylene Chloride	1.67848	1.44307	1.34687	1.33106	1.26507	1.27670	.621	1.39021	11.135		
trans-1,2-Dichloroethene	1.70857	1.51001	1.46869	1.45634	1.36206	1.37998	.701	1.48094	8.420		
Methyl-tertiary-butylether	3.07866	2.87897	2.75126	2.61744	2.62051	2.58626	.705	2.75552	6.992		
1,1-Dichloroethane	3.00942	2.78345	2.68241	2.72711	2.53989	2.61298	.800	2.72588	5.982		**
2-Butanone	.06878	.10413	.10524	.09518	.11644	.11347	.918	.10054	17.182		
2,2-Dichloropropane	2.28892	2.08137	2.05150	2.09128	2.02741	2.10641	.941	2.10782	4.421		
cis-1,2-Dichloroethene	1.73321	1.61938	1.51411	1.49753	1.41357	1.42604	.941	1.53397	7.977		
Chloroform	3.63603	3.34706	3.22257	3.24602	3.09260	3.10819	.982	3.27541	6.109	*	
1,1-Dichloropropene	2.25944	2.14454	2.09126	2.04245	1.96480	1.97036	1.114	2.07881	5.408		
1,2-Dichloroethane	2.29376	2.16479	2.07334	1.97685	1.91523	1.90915	1.154	2.05552	7.420		
1,2-Dichloroethane-d4 (SURR)	1.72176	1.74948	1.79147	1.78923	1.81991	1.84581	1.133	1.78628	2.532	(Conc=50.0,50.0,5	
1,1,1-Trichloroethane	.66742	.70216	.69706	.70441	.70565	.72301	.860	.69995	2.600		
Carbon Tetrachloride	.34904	.44551	.50682	.55326	.57513	.59830	.904	.50468	18.549		
Benzene	.87507	.86867	.84555	.82848	.81981	.82275	.926	.84339	2.832		
Trichloroethene	.49510	.45487	.43654	.41657	.43129	.43271	1.047	.44451	6.223		
1,2-Dichloropropane	.42611	.35643	.38555	.39837	.33326	.37312	1.073	.37881	8.573	*	
Dibromomethane	.44068	.43096	.41777	.40334	.39685	.39163	1.106	.41354	4.739		
Bromodichloromethane	.61514	.65462	.69746	.69728	.69515	.70348	1.111	.67719	5.195		
cis-1,3-Dichloropropene	.46703	.49857	.48387	.47599	.47396	.47046	1.229	.47831	2.392		
trans-1,3-Dichloropropene	.35836	.41618	.42532	.41177	.40916	.40699	1.328	.40463	5.827		
1,1,2-Trichloroethane	.29021	.31408	.31045	.29529	.30172	.29266	1.349	.30073	3.255		

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.7 (Cont) Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: GCMSD-2(3034A12982)
Calibration Date: 01/18/95

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Compound	Laboratory ID: >V2465 >V2466 >V2467 >V2468 >V2469 >V2470						RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF	RF					
	5.00	20.00	50.00	100.00	150.00	200.00					
1,3-Dichloropropane	.50841	.53170	.53208	.50405	.49318	.48497	1.398	.50907	3.830		
Dibromochloromethane	.57879	.64674	.69595	.66219	.67848	.66363	1.428	.65430	6.200		
1,2-Dibromoethane	.47894	.52921	.54458	.51182	.50526	.48724	1.465	.50951	4.865		
Bromoform	.38227	.48071	.53641	.51264	.55750	.53781	1.721	.50122	12.758		**
4-Methyl-2-Pentanone	.10495	.10996	.11177	.10424	.11298	.11538	.783	.10988	4.062		
Toluene-d8 (SURR)	1.18577	1.19282	1.20414	1.20581	1.20518	1.24098	.820	1.20579	1.578	(Conc=50.0,50.0,5	
Toluene	.83660	.79838	.76866	.76718	.76298	.79133	.830	.78752	3.552	*	
2-Hexanone	.12050	.13015	.12865	.11839	.12389	.12467	.890	.12437	3.644		
Tetrachloroethene	.78176	.74764	.73977	.72982	.71381	.73934	.910	.74202	3.054		
Chlorobenzene	1.12423	1.06312	1.06099	1.02727	1.02361	1.05245	1.005	1.05861	3.426		**
1,1,1,2-Tetrachloroethane	.55853	.56901	.59500	.58501	.58870	.61335	1.014	.58493	3.309		
Ethylbenzene	1.80006	1.75738	1.73153	1.71226	1.71240	1.76644	1.022	1.74668	1.974	*	
p & m-Xylene	1.58425	1.46123	1.47086	1.42952	1.31695	1.22154	1.034	1.41406	9.009	(Conc=10.0,40.0,1	
o-Xylene	1.56453	1.43732	1.43031	1.38335	1.36407	1.41104	1.084	1.43177	4.940		
Styrene	.66587	.65324	.64826	.63423	.62457	.64754	1.087	.64562	2.246		
Isopropylbenzene	1.97084	1.90899	1.89950	1.85722	1.83039	1.90184	1.138	1.89480	2.544		
1,1,2,2-Tetrachloroethane	.54403	.60821	.59361	.56082	.57918	.57530	1.150	.57686	3.958		**
p-Bromofluorobenzene (SURR)	.66259	.67274	.69490	.67076	.67236	.67872	1.157	.67535	1.613	(Conc=50.0,50.0,5	
1,2,3-Trichloropropane	.16595	.17142	.17100	.16278	.16796	.16700	1.166	.16768	1.933		
Bromobenzene	.68284	.63855	.64685	.61595	.61440	.62785	1.173	.63774	3.989		
n-Propylbenzene	.49170	.46927	.45507	.44126	.42975	.44441	1.190	.45524	4.900		
2-Chlorotoluene	.48663	.42607	.40294	.39938	.38532	.40550	1.199	.41764	8.681		
4-Chlorotoluene	.48214	.45660	.48579	.44150	.43873	.44340	1.208	.45803	4.594		
1,3,5-Trimethylbenzene	1.75466	1.61122	1.63279	1.56987	1.55635	1.61368	1.213	1.62309	4.350		
tert-Butylbenzene	1.72886	1.64824	1.63918	1.55561	1.53653	1.57350	1.258	1.61365	4.473		
1,2,4-Trimethylbenzene	1.68795	1.58925	1.57274	1.52618	1.49857	1.53915	1.260	1.56897	4.252		
sec-Butylbenzene	2.35272	2.25681	2.23381	2.16661	2.16329	2.13526	1.287	2.21808	3.628		
1,3-Dichlorobenzene	1.14181	1.04545	1.03531	.99940	.98774	1.01295	1.299	1.03711	5.365		
p-Isopropyltoluene	1.93078	1.80212	1.79505	1.79425	1.75799	1.77933	1.308	1.80992	3.385		
1,4-Dichlorobenzene	1.22112	1.16072	1.14455	1.08151	1.06591	1.08352	1.313	1.12622	5.326		
1,2-Dichlorobenzene	1.07153	.99728	.99370	.93613	.93850	.95355	1.357	.98178	5.232		
n-Butylbenzene	1.99542	1.84451	1.83659	1.80177	1.75668	1.83032	1.362	1.84422	4.377		
1,2-Dibromo-3-Chloropropane	.10564	.13720	.14090	.13244	.14558	.14385	1.458	.13427	11.024		
1,2,4-Trichlorobenzene	.95844	.91394	.92259	.87806	.87825	.88889	1.583	.90669	3.463		
Naphthalene	1.12091	1.10185	1.13105	1.09341	1.16488	1.16419	1.605	1.12938	2.685		
Hexachlorobutadiene	.95034	.85899	.86401	.82592	.82615	.84408	1.616	.86158	5.375		
1,2,3-Trichlorobenzene	.89627	.83349	.80663	.76448	.78040	.77552	1.640	.80946	6.087		

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.7 (Cont) Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: GCMSD-2(3034A12982)
Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Compound	RF 5.00	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	RRT	RF	% RSD	CCC	SPCC
Dichlorodifluoromethane	3.35896	2.81799	2.76825	2.61334	2.50108	2.47974	.232	2.75656	11.802		
Chloromethane	1.29551	1.10687	1.10486	1.06640	1.02545	1.00686	.257	1.10099	9.408		**
Vinyl Chloride	1.25971	1.08326	1.07964	1.02462	.97797	.96592	.272	1.06518	10.066	*	
Bromomethane	1.39188	1.13568	1.01220	.86851	.81755	.82885	.327	1.00911	22.225		
Chloroethane	.78744	.71713	.69770	.58787	.42512	.41572	.346	.60516	25.910		
Trichlorofluoromethane	4.38613	3.76983	3.69019	3.56132	3.37902	3.35296	.398	3.68991	10.269		
Acetone	.38773	.30389	.28552	.27043	.25219	.23102	.493	.28846	19.013		
1,1-Dichloroethene	1.59485	1.32926	1.30900	1.27812	1.19171	1.20566	.513	1.31810	11.099	*	
Carbon Disulfide	3.39028	3.06174	3.10341	3.10763	2.94537	2.98023	.585	3.09811	5.084		
Methylene Chloride	1.74445	1.42748	1.36566	1.30529	1.24527	1.23414	.619	1.38705	13.679		
trans-1,2-Dichloroethene	1.66422	1.43152	1.43233	1.38464	1.32070	1.30815	.701	1.42359	9.076		
Methyl-tertiary-butylether	3.28800	3.07941	2.28075	2.74496	2.58700	2.60368	.706	2.76397	13.194		
1,1-Dichloroethane	3.19786	2.73883	2.74094	2.67014	2.55595	2.55702	.800	2.74346	8.653		**
2-Butanone	.07208	.08411	.08000	.07189	.09205	.09193	.919	.08201	11.024		
2,2-Dichloropropane	2.23989	1.95300	1.93831	2.02129	1.97926	2.06154	.942	2.03221	5.480		
cis-1,2-Dichloroethene	1.75835	1.51536	1.49303	1.46920	1.36985	1.39764	.942	1.50057	9.205		
Chloroform	3.92792	3.31844	3.20424	3.15613	3.04044	3.01151	.982	3.27645	10.321	*	
1,1-Dichloropropene	2.36791	2.03613	2.00727	1.95511	1.92958	1.90222	1.114	2.03304	8.425		
1,2-Dichloroethane	2.54819	2.15047	2.12756	2.04983	1.95079	1.91428	1.152	2.12352	10.741		
1,2-Dichloroethane-d4 (SURR)	1.78485	1.81184	1.84382	1.87296	1.85134	1.90094	1.132	1.84429	2.258	(Conc=50.0,50.0,5	
1,1,1-Trichloroethane	.78193	.68049	.67570	.69085	.69106	.70636	.861	.70440	5.597		
Carbon Tetrachloride	.42121	.43781	.49230	.52049	.54085	.55433	.904	.49450	11.074		
Benzene	1.02658	.85071	.83508	.82616	.81930	.82015	.927	.86300	9.384		
Trichloroethene	.53170	.46562	.41950	.39292	.42206	.45497	1.048	.44779	10.887		
1,2-Dichloropropane	.48560	.41776	.39434	.40416	.40117	.40755	1.075	.41843	8.078	*	
Dibromomethane	.52348	.42565	.41265	.39983	.38500	.38811	1.108	.42245	12.257		
Bromodichloromethane	.72935	.66218	.69006	.70695	.69877	.70450	1.112	.69864	3.168		
cis-1,3-Dichloropropene	.56723	.47345	.46314	.47820	.45994	.45670	1.232	.48311	8.697		
trans-1,3-Dichloropropene	.46088	.42743	.41911	.41528	.40101	.39057	1.328	.41905	5.817		
1,1,2-Trichloroethane	.36864	.32150	.31471	.31380	.30360	.29777	1.350	.32000	7.903		

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.7 (Cont) Results of the Initial Calibration
WA # 0-098 Pier DrumInstrument ID: GCMSD-2(3034A12982)
Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Laboratory ID: >V2218 >V2219 >V2220 >V2221 >V2222 >V2223						RRT	RF	% RSD	CCC	SPCC
Compound	RF	RF	RF	RF	RF					
1,3-Dichloropropane	.64190	.54413	.53676	.52963	.49669	.48207	1.398	.53853	10.417	
Dibromochloromethane	.70026	.62766	.64435	.63321	.63975	.63574	1.428	.64683	4.141	
1,2-Dibromoethane	.61299	.52827	.53295	.53397	.49539	.47095	1.465	.52909	9.102	
Bromoform	.47532	.46800	.51576	.54465	.53958	.53116	1.719	.51241	6.466	**
4-Methyl-2-Pentanone	.12070	.11606	.10929	.10877	.10873	.11208	.784	.11260	4.323	
Toluene-d8 (SURR)	1.23288	1.20804	1.22265	1.19863	1.23940	1.24115	.821	1.22379	1.420	(Conc=50.0,50.0,5
Toluene	.91890	.75646	.76345	.74700	.76788	.76642	.830	.78669	8.291	*
2-Hexanone	.09059	.09601	.10052	.09388	.09390	.09454	.889	.09491	3.449	
Tetrachloroethene	.83533	.69193	.66857	.67711	.69011	.68342	.911	.70774	8.915	
Chlorobenzene	1.23378	1.03579	1.01487	1.01074	1.01533	1.00786	1.004	1.05306	8.459	**
1,1,1,2-Tetrachloroethane	.63597	.54869	.56958	.58137	.59197	.58915	1.014	.58612	4.960	
Ethylbenzene	1.89298	1.63410	1.67684	1.65397	1.64288	1.71764	1.022	1.70307	5.738	*
p & m-Xylene	1.67224	1.42785	1.40506	1.41492	1.41462	1.21707	1.034	1.42529	10.166	(Conc=10.0,40.0,1
o-Xylene	1.64812	1.38263	1.38344	1.36506	1.36300	1.34421	1.084	1.41441	8.160	
Styrene	.75176	.63094	.63876	.63775	.62915	.62465	1.087	.65217	7.526	
Isopropylbenzene	2.07046	1.76124	1.83162	1.80245	1.80095	1.78616	1.137	1.84215	6.199	
1,1,2,2-Tetrachloroethane	.71036	.60033	.61389	.60437	.58766	.57951	1.149	.61602	7.759	**
p-Bromofluorobenzene (SURR)	.64361	.64271	.65951	.65899	.65362	.64999	1.156	.65141	1.121	(Conc=50.0,50.0,5
1,2,3-Trichloropropane	.20940	.17026	.17330	.17068	.16455	.16481	1.165	.17550	9.665	
Bromobenzene	.72229	.60313	.61126	.61394	.59938	.58648	1.172	.62275	7.985	
n-Propylbenzene	.50182	.43146	.42907	.43350	.42210	.41619	1.189	.43902	7.158	
2-Chlorotoluene	.49854	.42504	.38566	.41990	.40835	.40089	1.199	.42306	9.346	
4-Chlorotoluene	.48494	.41451	.45157	.40504	.40662	.39355	1.207	.42604	8.217	
1,3,5-Trimethylbenzene	1.82511	1.53462	1.55580	1.57308	1.55146	1.51298	1.211	1.59218	7.281	
tert-Butylbenzene	1.81233	1.50737	1.56450	1.53943	1.50263	1.46713	1.257	1.56556	8.009	
1,2,4-Trimethylbenzene	1.74271	1.47971	1.52558	1.51949	1.48664	1.45452	1.259	1.53478	6.855	
sec-Butylbenzene	2.40771	2.09909	2.13736	2.14574	2.09367	2.05255	1.286	2.15602	5.927	
1,3-Dichlorobenzene	1.21146	.95889	1.00100	1.00744	.97563	.95421	1.298	1.01810	9.542	
p-Isopropyltoluene	1.99990	1.67026	1.73962	1.74907	1.72300	1.67987	1.307	1.76029	6.908	
1,4-Dichlorobenzene	1.29679	1.07605	1.08895	1.06939	1.01669	.97830	1.313	1.08770	10.171	
1,2-Dichlorobenzene	1.13388	.94282	.95637	.95775	.90765	.87035	1.356	.96147	9.454	
n-Butylbenzene	2.04900	1.77486	1.82456	1.82310	1.76213	1.73078	1.361	1.82740	6.263	
1,2-Dibromo-3-Chloropropane	.13289	.12865	.14428	.14268	.13656	.13501	1.457	.13668	4.332	
1,2,4-Trichlorobenzene	.93731	.84305	.88679	.87259	.81863	.81125	1.582	.86160	5.496	
Naphthalene	1.21214	1.04615	1.12685	1.12267	1.07381	1.08734	1.603	1.11149	5.209	
Hexachlorobutadiene	.90005	.78090	.80922	.80459	.74905	.74878	1.614	.79877	7.013	
1,2,3-Trichlorobenzene	.88330	.77862	.77532	.77301	.72377	.71405	1.638	.77468	7.764	

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.7 (Cont) Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: GCMSD-2(3034A12982)
Calibration Date: 01/24/95

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Compound	Laboratory ID: >V2536		>V2538		>V2539		>V2540		>V2541		>V2542		RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF					
Dichlorodifluoromethane	3.87059	3.33391	3.22838	3.19722	3.04054	3.03838	.238	3.28484	9.401								
Chloromethane	1.33100	1.23270	1.23554	1.24097	1.19235	1.18036	.264	1.23549	4.292								**
Vinyl Chloride	1.42724	1.20120	1.16458	1.15769	1.09937	1.06762	.279	1.18628	10.743	*							
Bromomethane	1.57720	1.27261	1.14402	.94713	.90314	.91798	.335	1.12701	23.487								
Chloroethane	.95468	.74135	.73814	.68707	.46469	.45004	.353	.67266	28.329								
Trichlorofluoromethane	4.81920	4.06191	3.99260	3.93498	3.79961	3.73424	.406	4.05709	9.675								
Acetone	.53048	.59603	.57807	.57474	.53902	.45065	.501	.54483	9.619								
1,1-Dichloroethene	1.65195	1.38084	1.41141	1.35827	1.26812	1.26250	.520	1.38885	10.247	*							
Carbon Disulfide	4.11539	3.52345	3.60498	3.59803	3.40153	3.42256	.592	3.61099	7.239								
Methylene Chloride	1.63957	1.44970	1.40192	1.38185	1.30150	1.28287	.624	1.40957	9.144								
trans-1,2-Dichloroethene	1.74445	1.49310	1.51774	1.45893	1.40142	1.34972	.704	1.49423	9.172								
Methyl-tertiary-butylether	2.53025	2.88152	2.87261	2.82026	2.75450	2.79136	.708	2.77508	4.657								
1,1-Dichloroethane	3.17823	2.83320	2.82486	2.74891	2.64835	2.61711	.801	2.80844	7.182								**
2-Butanone	.06774	.11941	.12425	.13992	.13311	.12528	.918	.11828	21.812								
2,2-Dichloropropane	2.11446	1.91858	1.99826	2.03052	1.99384	2.01711	.943	2.01213	3.152								
cis-1,2-Dichloroethene	1.75590	1.56003	1.53963	1.48402	1.41349	1.38872	.942	1.52363	8.679								
Chloroform	3.82738	3.32782	3.39219	3.27721	3.13932	3.11947	.983	3.34723	7.709	*							
1,1-Dichloropropene	2.53002	2.23838	2.25801	2.18515	2.08972	2.05856	1.115	2.22664	7.565								
1,2-Dichloroethane	2.32212	2.22188	2.23249	2.11327	2.02879	2.01172	1.153	2.15505	5.744								
1,2-Dichloroethane-d4 (SURR)	1.80818	1.86688	1.90156	1.90782	1.88785	1.95463	1.133	1.88782	2.577							(Conc=50.0,50.0,5	
1,1,1-Trichloroethane	.67387	.71797	.70861	.72047	.73814	.74145	.861	.71675	3.411								
Carbon Tetrachloride	.20594	.50237	.50860	.55424	.59366	.59796	.904	.49380	29.712								
Benzene	.88000	.89080	.86666	.84167	.85064	.83854	.927	.86139	2.471								
Trichloroethene	.45948	.41911	.43135	.41560	.42563	.42090	1.047	.42868	3.745								
1,2-Dichloropropane	.40905	.41680	.40002	.39911	.39908	.34417	1.075	.39471	6.524	*							
Dibromomethane	.39922	.41650	.39833	.37448	.38006	.36744	1.107	.38934	4.740								
Bromodichloromethane	.58803	.69560	.70545	.70742	.71957	.72447	1.111	.69009	7.399								
cis-1,3-Dichloropropene	.43794	.48943	.47384	.47337	.47791	.46995	1.228	.47041	3.674								
trans-1,3-Dichloropropene	.33367	.43240	.42173	.41850	.42425	.41409	1.326	.40744	8.996								
1,1,2-Trichloroethane	.27552	.31424	.31088	.29303	.30326	.30219	1.349	.29985	4.680								

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT lstd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.7 (Cont) Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: GCMSD-2(3034A12982)
Calibration Date: 01/24/95

Minimum RF for SPCC is 0.30

Maximum % RSD for CCC is 30.0%

Compound	Laboratory ID: >V2536 >V2538 >V2539 >V2540 >V2541 >V2542						RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF	RF					
1,3-Dichloropropane	.48698	.55994	.53783	.51608	.50381	.48895	1.397	.51560	5.573		
Dibromochloromethane	.51198	.66684	.65562	.64283	.68161	.66387	1.428	.63713	9.831		
1,2-Dibromoethane	.42110	.52417	.52814	.51233	.49747	.46737	1.464	.49176	8.344		
Bromoform	.33180	.47152	.50099	.52041	.51945	.53195	1.720	.47935	15.711	**	
4-Methyl-2-Pentanone	.07407	.11316	.11208	.11135	.11662	.12167	.782	.10816	15.834		
Toluene-d8 (SURR)	1.23921	1.22496	1.24097	1.20978	1.24578	1.27976	.820	1.24008	1.893	(Conc=50.0,50.0,5	
Toluene	.82772	.77210	.78060	.74870	.76776	.77716	.829	.77901	3.383	*	
2-Hexanone	.09703	.14617	.14668	.14184	.13896	.13372	.890	.13407	14.002		
Tetrachloroethene	.77317	.72219	.72002	.67760	.69136	.69114	.910	.71258	4.842		
Chlorobenzene	1.10151	.99880	1.02258	.99645	1.01279	1.03562	1.005	1.02796	3.785	**	
1,1,1,2-Tetrachloroethane	.55292	.56851	.58045	.58317	.60006	.61089	1.014	.58267	3.592		
Ethylbenzene	1.81262	1.62657	1.74459	1.64482	1.70056	1.75736	1.022	1.71442	4.137	*	
p & m-Xylene	1.50920	1.48010	1.42664	1.43163	1.40148	1.41172	1.034	1.44346	2.916	(Conc=10.0,40.0,1	
o-Xylene	1.46768	1.40468	1.41423	1.36579	1.36497	1.39559	1.084	1.40216	2.705		
Styrene	.63468	.64445	.66019	.64504	.65262	.67085	1.087	.65131	1.972		
Isopropylbenzene	1.88142	1.82038	1.84225	1.81909	1.78755	1.84085	1.137	1.83192	1.709		
1,1,2,2-Tetrachloroethane	.52736	.59468	.59124	.58592	.59069	.61871	1.149	.58477	5.201	**	
p-Bromofluorobenzene (SURR)	.61920	.64160	.65114	.65252	.64023	.64642	1.156	.64185	1.892	(Conc=50.0,50.0,5	
1,2,3-Trichloropropane	.13842	.16273	.16964	.16608	.16922	.17714	1.165	.16387	8.150		
Bromobenzene	.61122	.60022	.60645	.60337	.58758	.59426	1.172	.60052	1.422		
n-Propylbenzene	.43923	.42987	.42881	.43114	.41808	.42385	1.189	.42850	1.664		
2-Chlorotoluene	.42353	.41582	.41164	.40546	.38880	.39146	1.199	.40612	3.382		
4-Chlorotoluene	.46994	.42800	.44217	.43031	.43036	.43808	1.208	.43981	3.574		
1,3,5-Trimethylbenzene	1.64832	1.59380	1.57789	1.58833	1.57327	1.59946	1.213	1.59684	1.693		
tert-Butylbenzene	1.63453	1.54839	1.52996	1.53339	1.48713	1.50598	1.257	1.53990	3.324		
1,2,4-Trimethylbenzene	1.62601	1.51666	1.53400	1.54452	1.51601	1.52443	1.260	1.54360	2.708		
sec-Butylbenzene	2.25109	2.11870	2.15763	2.12733	2.10226	2.12359	1.286	2.14677	2.524		
1,3-Dichlorobenzene	1.05230	.97434	.96809	.97941	.93812	.93635	1.298	.97477	4.327		
p-Isopropyltoluene	1.80251	1.71410	1.71287	1.77950	1.72413	1.74507	1.308	1.74636	2.129		
1,4-Dichlorobenzene	1.10291	1.05704	1.05688	1.04998	1.00924	1.00552	1.313	1.04693	3.439		
1,2-Dichlorobenzene	.91241	.94730	.90935	.92280	.88469	.89748	1.356	.91234	2.364		
n-Butylbenzene	1.83297	1.79140	1.82679	1.84606	1.79547	1.81464	1.362	1.81789	1.184		
1,2-Dibromo-3-Chloropropane	.08863	.12806	.13799	.14184	.14247	.15083	1.457	.13164	16.960		
1,2,4-Trichlorobenzene	.81189	.83411	.85700	.88606	.85526	.85434	1.582	.84978	2.930		
Naphthalene	.78658	1.01931	1.07544	1.12158	1.10142	1.17141	1.604	1.04596	13.066		
Hexachlorobutadiene	.77730	.77380	.79260	.82279	.77766	.77930	1.614	.78724	2.361		
1,2,3-Trichlorobenzene	.72841	.76771	.74646	.77570	.76195	.75413	1.639	.75573	2.227		

RF - Response Factor (Subscript is amount in ppb)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/13/95

Time: 13:05

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	2.75656	2.55358	7.36		
Chloromethane	1.10099	.95887	12.91		**
Vinyl Chloride	1.06518	1.01573	4.64	*	
Bromomethane	1.00911	1.14206	13.17		
Chloroethane	.60516	.69096	14.18		
Trichlorofluoromethane	3.68991	3.88220	5.21		
Acetone	.28846	.42185	46.24		
1,1-Dichloroethene	1.31810	1.34489	2.03	*	
Carbon Disulfide	3.09811	3.21882	3.90		
Methylene Chloride	1.38705	1.31731	5.03		
trans-1,2-Dichloroethene	1.42359	1.47443	3.57		
Methyl-tertiary-butylether	2.76397	2.72785	1.31		
1,1-Dichloroethane	2.74346	2.64074	3.74		**
2-Butanone	.08201	.09353	14.04		
2,2-Dichloropropane	2.03221	2.12645	4.64		
cis-1,2-Dichloroethene	1.50057	1.53385	2.22		
Chloroform	3.27645	3.27838	.06	*	
1,1-Dichloropropene	2.03304	2.05881	1.27		
1,2-Dichloroethane	2.12352	1.99255	6.17		
1,2-Dichloroethane-d4 (SURR)	1.84429	1.71877	6.81		
1,1,1-Trichloroethane	.70440	.71497	1.50		
Carbon Tetrachloride	.49450	.48397	2.13		
Benzene	.86300	.81681	5.35		
Trichloroethene	.44779	.43952	1.85		
1,2-Dichloropropane	.41843	.34781	16.88	*	
Dibromomethane	.42245	.38732	8.32		
Bromodichloromethane	.69864	.65445	6.33		
cis-1,3-Dichloropropene	.48311	.47488	1.70		(Conc=50.00)
trans-1,3-Dichloropropene	.41905	.40980	2.21		(Conc=50.00)
1,1,2-Trichloroethane	.32000	.28058	12.32		
1,3-Dichloropropane	.53853	.50223	6.74		
Dibromochloromethane	.64683	.60343	6.71		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/13/95

Time: 13:05

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.52909	.50275	4.98		
Bromoform	.51241	.48800	4.76		**
4-Methyl-2-Pentanone	.11260	.10560	6.22		
Toluene-d8 (Surr)	1.22379	1.19818	2.09		
Toluene	.78669	.76621	2.60	*	
2-Hexanone	.09491	.12083	27.32		
Tetrachloroethene	.70774	.73895	4.41		
Chlorobenzene	1.05306	1.04191	1.06		**
1,1,1,2-Tetrachloroethane	.58612	.58731	.20		
Ethylbenzene	1.70307	1.66329	2.34	*	
p & m-Xylene	1.42529	1.46331	2.67		(Conc=100.00)
o-Xylene	1.41441	1.39627	1.28		
Styrene	.65217	.63901	2.02		
Isopropylbenzene	1.84215	1.87564	1.82		
1,1,2,2-Tetrachloroethane	.61602	.54043	12.27		**
p-Bromofluorobenzene (Surr)	.65141	.67324	3.35		
1,2,3-Trichloropropane	.17550	.15655	10.80		
Bromobenzene	.62275	.63117	1.35		
n-Propylbenzene	.43902	.45095	2.72		
2-Chlorotoluene	.42306	.40535	4.19		
4-Chlorotoluene	.42604	.44780	5.11		
1,3,5-Trimethylbenzene	1.59218	1.59993	.49		
tert-Butylbenzene	1.56556	1.61927	3.43		
1,2,4-Trimethylbenzene	1.53478	1.54495	.66		
sec-Butylbenzene	2.15602	2.19594	1.85		
1,3-Dichlorobenzene	1.01810	1.02475	.65		
p-Isopropyltoluene	1.76029	1.82493	3.67		
1,4-Dichlorobenzene	1.08770	1.12878	3.78		
1,2-Dichlorobenzene	.96147	.96826	.71		
n-Butylbenzene	1.82740	1.81106	.89		
1,2-Dibromo-3-Chloropropane	.13668	.13300	2.69		
1,2,4-Trichlorobenzene	.86160	.92075	6.86		
Naphthalene	1.11149	1.01888	8.33		
Hexachlorobutadiene	.79877	.89094	11.54		
1,2,3-Trichlorobenzene	.77468	.78860	1.80		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/14/95

Time: 11:42

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	2.75656	2.50463	9.14		
Chloromethane	1.10099	1.04281	5.28		**
Vinyl Chloride	1.06518	1.03315	3.01	*	
Bromomethane	1.00911	1.13479	12.45		
Chloroethane	.60516	.68473	13.15		
Trichlorofluoromethane	3.68991	3.82987	3.79		
Acetone	.28846	.37413	29.70		
1,1-Dichloroethene	1.31810	1.35567	2.85	*	
Carbon Disulfide	3.09811	3.24807	4.84		
Methylene Chloride	1.38705	1.40269	1.13		
trans-1,2-Dichloroethene	1.42359	1.48376	4.23		
Methyl-tertiary-butylether	2.76397	2.46775	10.72		
1,1-Dichloroethane	2.74346	2.72246	.77		**
2-Butanone	.08201	.08049	1.85		
2,2-Dichloropropane	2.03221	2.18718	7.63		
cis-1,2-Dichloroethene	1.50057	1.53246	2.13		
Chloroform	3.27645	3.27639	.00	*	
1,1-Dichloropropene	2.03304	2.11598	4.08		
1,2-Dichloroethane	2.12352	1.97882	6.81		
1,2-Dichloroethane-d4 (SURR)	1.84429	1.71958	6.76		
1,1,1-Trichloroethane	.70440	.70398	.06		
Carbon Tetrachloride	.49450	.56042	13.33		
Benzene	.86300	.84292	2.33		
Trichloroethene	.44779	.43684	2.45		
1,2-Dichloropropane	.41843	.32522	22.28	*	
Dibromomethane	.42245	.35463	16.06		
Bromodichloromethane	.69864	.63877	8.57		
cis-1,3-Dichloropropene	.48311	.45684	5.44		(Conc=50.00)
trans-1,3-Dichloropropene	.41905	.40693	2.89		(Conc=50.00)
1,1,2-Trichloroethane	.32000	.28059	12.32		
1,3-Dichloropropane	.53853	.48841	9.31		
Dibromochloromethane	.64683	.60466	6.52		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/14/95

Time: 11:42

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.52909	.48850	7.67		
Bromoform	.51241	.47085	8.11		**
4-Methyl-2-Pentanone	.11260	.08901	20.95		
Toluene-d8 (SURR)	1.22379	1.22117	.21		
Toluene	.78669	.77357	1.67	*	
2-Hexanone	.09491	.10288	8.40		
Tetrachloroethene	.70774	.73834	4.32		
Chlorobenzene	1.05306	1.04481	.78		**
1,1,1,2-Tetrachloroethane	.58612	.58108	.86		
Ethylbenzene	1.70307	1.65794	2.65	*	
p & m-Xylene	1.42529	1.48248	4.01		(Conc=100.00)
o-Xylene	1.41441	1.40737	.50		
Styrene	.65217	.64200	1.56		
Isopropylbenzene	1.84215	1.87787	1.94		
1,1,2,2-Tetrachloroethane	.61602	.51245	16.81		**
p-Bromofluorobenzene (SURR)	.65141	.67719	3.96		
1,2,3-Trichloropropane	.17550	.15249	13.11		
Bromobenzene	.62275	.62966	1.11		
n-Propylbenzene	.43902	.45687	4.07		
2-Chlorotoluene	.42306	.40451	4.39		
4-Chlorotoluene	.42604	.47032	10.39		
1,3,5-Trimethylbenzene	1.59218	1.60323	.69		
tert-Butylbenzene	1.56556	1.63691	4.56		
1,2,4-Trimethylbenzene	1.53478	1.55568	1.36		
sec-Butylbenzene	2.15602	2.19908	2.00		
1,3-Dichlorobenzene	1.01810	1.02799	.97		
p-Isopropyltoluene	1.76029	1.83476	4.23		
1,4-Dichlorobenzene	1.08770	1.12009	2.98		
1,2-Dichlorobenzene	.96147	.95389	.79		
n-Butylbenzene	1.82740	1.82389	.19		
1,2-Dibromo-3-Chloropropane	.13668	.12159	11.04		
1,2,4-Trichlorobenzene	.86160	.92086	6.88		
Naphthalene	1.11149	.97744	12.06		
Hexachlorobutadiene	.79877	.90942	13.85		
1,2,3-Trichlorobenzene	.77468	.77641	.22		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/17/95

Time: 14:32

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	2.75656	2.49224	9.59		
Chloromethane	1.10099	1.01824	7.52		**
Vinyl Chloride	1.06518	1.07157	.60	*	
Bromomethane	1.00911	1.24400	23.28		
Chloroethane	.60516	.73023	20.67		
Trichlorofluoromethane	3.68991	3.91212	6.02		
Acetone	.28846	.44064	52.75		
1,1-Dichloroethene	1.31810	1.40152	6.33	*	
Carbon Disulfide	3.09811	3.34504	7.97		
Methylene Chloride	1.38705	1.42499	2.74		
trans-1,2-Dichloroethene	1.42359	1.53474	7.81		
Methyl-tertiary-butylether	2.76397	2.64108	4.45		
1,1-Dichloroethane	2.74346	2.79274	1.80		**
2-Butanone	.08201	.09665	17.85		
2,2-Dichloropropane	2.03221	2.22924	9.70		
cis-1,2-Dichloroethene	1.50057	1.58243	5.46		
Chloroform	3.27645	3.40136	3.81	*	
1,1-Dichloropropene	2.03304	2.09723	3.16		
1,2-Dichloroethane	2.12352	2.10906	.68		
1,2-Dichloroethane-d4 (SURR)	1.84429	1.75566	4.81		
1,1,1-Trichloroethane	.70440	.73263	4.01		
Carbon Tetrachloride	.49450	.50930	2.99		
Benzene	.86300	.85655	.75		
Trichloroethene	.44779	.43745	2.31		
1,2-Dichloropropane	.41843	.40573	3.04	*	
Dibromomethane	.42245	.42741	1.17		
Bromodichloromethane	.69864	.70826	1.38		
cis-1,3-Dichloropropene	.48311	.50675	4.89		(Conc=50.00)
trans-1,3-Dichloropropene	.41905	.44702	6.68		(Conc=50.00)
1,1,2-Trichloroethane	.32000	.30797	3.76		
1,3-Dichloropropane	.53853	.53966	.21		
Dibromochloromethane	.64683	.71826	11.04		

RF - Response Factor from daily standard file at 50.00 ppb

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/17/95

Time: 14:32

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 11/22/94

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.52909	.53886	1.85		
Bromoform	.51241	.53444	4.30		**
4-Methyl-2-Pentanone	.11260	.10554	6.28		
Toluene-d8 (SURR)	1.22379	1.19695	2.19		
Toluene	.78669	.79232	.72	*	
2-Hexanone	.09491	.11717	23.45		
Tetrachloroethene	.70774	.75584	6.80		
Chlorobenzene	1.05306	1.07613	2.19		**
1,1,1,2-Tetrachloroethane	.58612	.60649	3.47		
Ethylbenzene	1.70307	1.76439	3.60	*	
p & m-Xylene	1.42529	1.48963	4.51		(Conc=100.00)
o-Xylene	1.41441	1.45118	2.60		
Styrene	.65217	.66155	1.44		
Isopropylbenzene	1.84215	1.94756	5.72		
1,1,2,2-Tetrachloroethane	.61602	.58083	5.71		**
p-Bromofluorobenzene (SURR)	.65141	.68763	5.56		
1,2,3-Trichloropropane	.17550	.17123	2.44		
Bromobenzene	.62275	.65918	5.85		
n-Propylbenzene	.43902	.46245	5.34		
2-Chlorotoluene	.42306	.40903	3.32		
4-Chlorotoluene	.42604	.49614	16.45		
1,3,5-Trimethylbenzene	1.59218	1.64760	3.48		
tert-Butylbenzene	1.56556	1.67700	7.12		
1,2,4-Trimethylbenzene	1.53478	1.60743	4.73		
sec-Butylbenzene	2.15602	2.26612	5.11		
1,3-Dichlorobenzene	1.01810	1.07923	6.00		
p-Isopropyltoluene	1.76029	1.89192	7.48		
1,4-Dichlorobenzene	1.08770	1.14138	4.94		
1,2-Dichlorobenzene	.96147	1.01712	5.79		
n-Butylbenzene	1.82740	1.86937	2.30		
1,2-Dibromo-3-Chloropropane	.13668	.14181	3.76		
1,2,4-Trichlorobenzene	.86160	.96730	12.27		
Naphthalene	1.11149	1.08289	2.57		
Hexachlorobutadiene	.79877	.91484	14.53		
1,2,3-Trichlorobenzene	.77468	.84018	8.46		

RF - Response Factor from daily standard file at 50.00 ppb

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

2 0 0307

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/18/95

Time: 08:27

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/18/95

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	2.41009	2.38801	.92		
Chloromethane	1.04526	1.00295	4.05		**
Vinyl Chloride	1.03762	1.03141	.60	*	
Bromomethane	1.07394	1.00215	6.68		
Chloroethane	.61678	.70076	13.62		
Trichlorofluoromethane	3.77576	3.72338	1.39		
Acetone	.46918	.47822	1.93		
1,1-Dichloroethene	1.34780	1.33850	.69	*	
Carbon Disulfide	3.16441	3.07738	2.75		
Methylene Chloride	1.39021	1.37674	.97		
trans-1,2-Dichloroethene	1.48094	1.47818	.19		
Methyl-tertiary-butylether	2.75552	2.77875	.84		
1,1-Dichloroethane	2.72588	2.72658	.03		**
2-Butanone	.10054	.10345	2.89		
2,2-Dichloropropane	2.10782	2.10790	.00		
cis-1,2-Dichloroethene	1.53397	1.55992	1.69		
Chloroform	3.27541	3.30868	1.02	*	
1,1-Dichloropropene	2.07881	2.05973	.92		
1,2-Dichloroethane	2.05552	2.04742	.39		
1,2-Dichloroethane-d4 (SURR)	1.78628	1.75591	1.70		
1,1,1-Trichloroethane	.69995	.71418	2.03		
Carbon Tetrachloride	.50468	.47367	6.14		
Benzene	.84339	.85451	1.32		
Trichloroethene	.44451	.45354	2.03		
1,2-Dichloropropane	.37881	.33551	11.43	*	
Dibromomethane	.41354	.38513	6.87		
Bromodichloromethane	.67719	.66356	2.01		
cis-1,3-Dichloropropene	.47831	.49244	2.95		(Conc=50.00)
trans-1,3-Dichloropropene	.40463	.42874	5.96		(Conc=50.00)
1,1,2-Trichloroethane	.30073	.30322	.83		
1,3-Dichloropropane	.50907	.52452	3.04		
Dibromochloromethane	.65430	.67871	3.73		

RF - Response Factor from daily standard file at 50.00 ppb

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/18/95

Time: 08:27

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/18/95

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.50951	.52900	3.83		
Bromoform	.50122	.52176	4.10		**
4-Methyl-2-Pentanone	.10988	.11808	7.46		
Toluene-d8 (SURR)	1.20579	1.20925	.29		
Toluene	.78752	.79244	.63	*	
2-Hexanone	.12437	.13527	8.76		
Tetrachloroethene	.74202	.75230	1.38		
Chlorobenzene	1.05861	1.08336	2.34		**
1,1,1,2-Tetrachloroethane	.58493	.59720	2.10		
Ethylbenzene	1.74668	1.74948	.16	*	
p & m-Xylene	1.41406	1.47559	4.35		(Conc=100.00)
o-Xylene	1.43177	1.44755	1.10		
Styrene	.64562	.65686	1.74		
Isopropylbenzene	1.89480	1.93251	1.99		
1,1,2,2-Tetrachloroethane	.57686	.59682	3.46		**
p-Bromofluorobenzene (SURR)	.67535	.69319	2.64		
1,2,3-Trichloropropane	.16768	.17259	2.93		
Bromobenzene	.63774	.65675	2.98		
n-Propylbenzene	.45524	.46106	1.28		
2-Chlorotoluene	.41764	.44855	7.40		
4-Chlorotoluene	.45803	.43718	4.55		
1,3,5-Trimethylbenzene	1.62309	1.61498	.50		
tert-Butylbenzene	1.61365	1.63576	1.37		
1,2,4-Trimethylbenzene	1.56897	1.57045	.09		
sec-Butylbenzene	2.21808	2.22863	.48		
1,3-Dichlorobenzene	1.03711	1.06074	2.28		
p-Isopropyltoluene	1.80992	1.83815	1.56		
1,4-Dichlorobenzene	1.12622	1.12822	.18		
1,2-Dichlorobenzene	.98178	.98022	.16		
n-Butylbenzene	1.84422	1.82916	.82		
1,2-Dibromo-3-Chloropropane	.13427	.13950	3.89		
1,2,4-Trichlorobenzene	.90669	.92061	1.53		
Naphthalene	1.12938	1.10858	1.84		
Hexachlorobutadiene	.86158	.85528	.73		
1,2,3-Trichlorobenzene	.80946	.79040	2.35		

RF - Response Factor from daily standard file at 50.00 ppb

 \overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/30/95

Time: 15:55

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/24/95

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	3.28484	3.30927	.74		
Chloromethane	1.23549	1.03118	16.54		**
Vinyl Chloride	1.18628	1.05360	11.19	*	
Bromomethane	1.12701	1.17117	3.92		
Chloroethane	.67266	.68840	2.34		
Trichlorofluoromethane	4.05709	4.30491	6.11		
Acetone	.54483	.47637	12.57		
1,1-Dichloroethene	1.38885	1.36244	1.90	*	
Carbon Disulfide	3.61099	3.32824	7.83		
Methylene Chloride	1.40957	1.34012	4.93		
trans-1,2-Dichloroethene	1.49423	1.47629	1.20		
Methyl-tertiary-butylether	2.77508	2.66306	4.04		
1,1-Dichloroethane	2.80844	2.66450	5.13		**
2-Butanone	.11828	.09255	21.75		
2,2-Dichloropropane	2.01213	2.08375	3.56		
cis-1,2-Dichloroethene	1.52363	1.51471	.59		
Chloroform	3.34723	3.41667	2.07	*	
1,1-Dichloropropene	2.22664	2.14361	3.73		
1,2-Dichloroethane	2.15505	2.08329	3.33		
1,2-Dichloroethane-d4 (SURR)	1.88782	1.79184	5.08		
1,1,1-Trichloroethane	.71675	.77330	7.89		
Carbon Tetrachloride	.49380	.55411	12.21		
Benzene	.86139	.81629	5.24		
Trichloroethene	.42868	.47739	11.36		
1,2-Dichloropropane	.39471	.36684	7.06	*	
Dibromomethane	.38934	.40404	3.78		
Bromodichloromethane	.69009	.72820	5.52		
cis-1,3-Dichloropropene	.47041	.47237	.42		(Conc=50.00)
trans-1,3-Dichloropropene	.40744	.41714	2.38		(Conc=50.00)
1,1,2-Trichloroethane	.29985	.28286	5.67		
1,3-Dichloropropane	.51560	.49854	3.31		
Dibromochloromethane	.63713	.66665	4.63		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/30/95

Time: 15:55

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/24/95

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.49176	.50563	2.82		
Bromoform	.47935	.49209	2.66		**
4-Methyl-2-Pentanone	.10816	.09059	16.24		
Toluene-d8 (SURR)	1.24008	1.20837	2.56		
Toluene	.77901	.77101	1.03	*	
2-Hexanone	.13407	.11534	13.97		
Tetrachloroethene	.71258	.76189	6.92		
Chlorobenzene	1.02796	1.02748	.05		**
1,1,1,2-Tetrachloroethane	.58267	.60884	4.49		
Ethylbenzene	1.71442	1.66821	2.70	*	
p & m-Xylene	1.44346	1.44399	.04		(Conc=100.00)
o-Xylene	1.40216	1.37114	2.21		
Styrene	.65131	.64632	.77		
Isopropylbenzene	1.83192	1.86224	1.65		
1,1,2,2-Tetrachloroethane	.58477	.53158	9.09		**
p-Bromofluorobenzene (SURR)	.64185	.66225	3.18		
1,2,3-Trichloropropane	.16387	.15981	2.48		
Bromobenzene	.60052	.62622	4.28		
n-Propylbenzene	.42850	.43434	1.36		
2-Chlorotoluene	.40612	.42219	3.96		
4-Chlorotoluene	.43981	.41835	4.88		
1,3,5-Trimethylbenzene	1.59684	1.61754	1.30		
tert-Butylbenzene	1.53990	1.59076	3.30		
1,2,4-Trimethylbenzene	1.54360	1.55782	.92		
sec-Butylbenzene	2.14677	2.13806	.41		
1,3-Dichlorobenzene	.97477	1.00173	2.77		
p-Isopropyltoluene	1.74636	1.75753	.64		
1,4-Dichlorobenzene	1.04693	1.08135	3.29		
1,2-Dichlorobenzene	.91234	.95769	4.97		
n-Butylbenzene	1.81789	1.82667	.48		
1,2-Dibromo-3-Chloropropane	.13164	.12187	7.42		
1,2,4-Trichlorobenzene	.84978	.89828	5.71		
Naphthalene	1.04596	.97879	6.42		
Hexachlorobutadiene	.78724	.85695	8.85		
1,2,3-Trichlorobenzene	.75573	.77306	2.29		

RF - Response Factor from daily standard file at 50.00 ppb

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/31/95

Time: 10:38

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/24/95

Minimum RF for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	3.28484	3.26401	.63		
Chloromethane	1.23549	1.05335	14.74		**
Vinyl Chloride	1.18628	1.06341	10.36	*	
Bromomethane	1.12701	1.18116	4.80		
Chloroethane	.67266	.69678	3.59		
Trichlorofluoromethane	4.05709	4.15515	2.42		
Acetone	.54483	.52082	4.41		
1,1-Dichloroethene	1.38885	1.36316	1.85	*	
Carbon Disulfide	3.61099	3.24964	10.01		
Methylene Chloride	1.40957	1.33552	5.25		
trans-1,2-Dichloroethene	1.49423	1.48100	.89		
Methyl-tertiary-butylether	2.77508	2.84025	2.35		
1,1-Dichloroethane	2.80844	2.61787	6.79		**
2-Butanone	.11828	.10639	10.06		
2,2-Dichloropropane	2.01213	2.11909	5.32		
cis-1,2-Dichloroethene	1.52363	1.50501	1.22		
Chloroform	3.34723	3.34187	.16	*	
1,1-Dichloropropene	2.22664	2.12946	4.36		
1,2-Dichloroethane	2.15505	2.11884	1.68		
1,2-Dichloroethane-d4 (SURR)	1.88782	1.83302	2.90		
1,1,1-Trichloroethane	.71675	.73525	2.58		
Carbon Tetrachloride	.49380	.52102	5.51		
Benzene	.86139	.81091	5.86		
Trichloroethene	.42868	.46479	8.42		
1,2-Dichloropropane	.39471	.37642	4.63	*	
Dibromomethane	.38934	.40067	2.91		
Bromodichloromethane	.69009	.70142	1.64		
cis-1,3-Dichloropropene	.47041	.47411	.79		(Conc=50.00)
trans-1,3-Dichloropropene	.40744	.42183	3.53		(Conc=50.00)
1,1,2-Trichloroethane	.29985	.29040	3.15		
1,3-Dichloropropane	.51560	.50527	2.00		
Dibromochloromethane	.63713	.63488	.35		

RF - Response Factor from daily standard file at 50.00 ppb

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.8 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/31/95

Time: 10:38

Instrument ID: GCMSD-2(3034A12982)

Initial Calibration Date: 01/24/95

Minimum \overline{RF} for SPCC is 0.30

Maximum % Diff for CCC is 25.0%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
1,2-Dibromoethane	.49176	.50485	2.66		
Bromoform	.47935	.48333	.83		**
4-Methyl-2-Pentanone	.10816	.10380	4.03		
Toluene-d8 (SURR)	1.24008	1.19932	3.29		
Toluene	.77901	.75518	3.06	*	
2-Hexanone	.13407	.12971	3.25		
Tetrachloroethene	.71258	.72595	1.88		
Chlorobenzene	1.02796	1.01074	1.68		**
1,1,1,2-Tetrachloroethane	.58267	.57832	.75		
Ethylbenzene	1.71442	1.66809	2.70	*	
p & m-Xylene	1.44346	1.44396	.03		(Conc=100.00)
o-Xylene	1.40216	1.38607	1.15		
Styrene	.65131	.64868	.40		
Isopropylbenzene	1.83192	1.83271	.04		
1,1,2,2-Tetrachloroethane	.58477	.54251	7.23		**
p-Bromofluorobenzene (SURR)	.64185	.67239	4.76		
1,2,3-Trichloropropane	.16387	.16581	1.18		
Bromobenzene	.60052	.61848	2.99		
n-Propylbenzene	.42850	.43548	1.63		
2-Chlorotoluene	.40612	.41388	1.91		
4-Chlorotoluene	.43981	.42890	2.48		
1,3,5-Trimethylbenzene	1.59684	1.59268	.26		
tert-Butylbenzene	1.53990	1.57459	2.25		
1,2,4-Trimethylbenzene	1.54360	1.53225	.74		
sec-Butylbenzene	2.14677	2.13756	.43		
1,3-Dichlorobenzene	.97477	.99352	1.92		
p-Isopropyltoluene	1.74636	1.79593	2.84		
1,4-Dichlorobenzene	1.04693	1.06849	2.06		
1,2-Dichlorobenzene	.91234	.92052	.90		
n-Butylbenzene	1.81789	1.78520	1.80		
1,2-Dibromo-3-Chloropropane	.13164	.12764	3.04		
1,2,4-Trichlorobenzene	.84978	.86661	1.98		
Naphthalene	1.04596	1.01847	2.63		
Hexachlorobutadiene	.78724	.83425	5.97		
1,2,3-Trichlorobenzene	.75573	.74815	1.00		

RF - Response Factor from daily standard file at 50.00 ppb

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.9 Correlation of Samples and Calibrations

Samples	Initial Calibration	Continuing Calibration
None	11/22/94	—
Lab Blank, 00638, 00635 MS, 00635 MSD	11/22/94	1/13/95
Lab Blank-Water, Lab Blank-Soil, 00640, 00643 00644, 00642 MS, 00642 MSD	11/22/94	1/14/95
Lab Blank-Soil, 00642	11/22/94	1/17/95
Lab Blank, 00636, 00641, 00635, 00639, 00634, 00637	1/18/95	—
Lab Blank-Water, Lab Blank-Soil, 00639	1/18/95	1/18/95
None	1/24/95	—
Lab Blank, 00914, 00912, 00913, 00914 MS, 00914 MSD	1/24/95	1/30/95
Lab Blank, 00914, 00912, 00913, 00912, 00913	1/24/95	1/31/95

Table 2.10 Results of the TCLP Surrogate Recoveries
WA # 0-098 Pier Drum

Sample ID	S1 (DIC)	S2 (TOL)	S3 (BFB)	Total Out
Lab Blank	98	98	102	0
Blank Spike	113	100	107	0
95-01-227-1 MS	105	103	105	0
95-01-227-1 MSD	115 *	102	106	1
B 00644	115 *	101	108	1
B 00643	102	101	107	0
B 00642	107	101	105	0

QC Limits

S1 (DIC) = 1,2-Dichloroethane-d4 76-114
 S2 (TOL) = Toluene-d8 88-110
 S3 (BFB) = Bromofluorobenzene 86-115

Table 2.11 Results of the TCLP Internal Standard Areas
WA # 0-098 Pier Drum

Sample ID	ISTD 1 AREA	ISTD 2 AREA	ISTD 3 AREA	Total Out
50 ppb Std	17237	66998	50342	
95-01-227-1 MS	18092	54895	49536	0
95-01-227-1 MSD	12618	62303	35123	0
Blank Spike	13039	44370	36043	0
50 ppb Std	16162	69192	50749	
B 00643	14388	52563	39712	0
B 00642	14158	52247	40860	0
B 00644	14566	52968	40636	0

the acceptable QC range is 50 - 200% of the
appropriate standard

ISTD 1 denotes bromochloromethane

ISTD 2 denotes 1,4-difluorobenzene

ISTD 3 denotes chlorobenzene-d5

Table 2.12 Results of the MS/MSD Analysis for the TCLP VOA Samples
WA # 0-098 Pier Drum

2 2 3336

Sample ID: 95-01-227-1

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	RPD	QC Limits RPD	Rec.
1,1-Dichloroethene	500	ND	336.3	67	317.7	64	6	14	61-145
Trichloroethene	500	ND	400.0	80	380.4	76	5	14	71-120
Benzene	500	ND	410.8	82	409.5	82	0	11	76-127
Toluene	500	ND	425.7	85	408.5	82	4	13	76-125
Chlorobenzene	500	ND	430.9	86	428.5	86	1	13	75-130

Table 2.13 Results of the TCLP Surrogate Recoveries
for the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID	S1 (DIC)	S2 (TOL)	S3 (BFB)	Total Out
Lab Blank	84	102	96	0
Lab Blank MS	81	100	102	0
00911 MS	79	103	111	0
00911 MSD	81	102	102	0
00911	85	100	102	0
00915	91	103	110	0
00916	90	100	108	0

QC Limits

S1 (DIC) = 1,2-Dichloroethane-d4 76-114
S2 (TOL) = Toluene-d8 88-110
S3 (BFB) = Bromofluorobenzene 86-115

Table 2.14 Results of the TCLP Internal Standard Areas
for the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID	ISTD 1 AREA	ISTD 2 AREA	ISTD 3 AREA	Total Out
50 ppb Std	70233	427523	341877	
Blank	81241	471191	365543	0
00911	68988	403569	315750	0
00911 MS	74163	442206	380584	0
00911 MSD	74929	434047	360285	0
Blank Spike	73923	426348	342345	0
50 ppb Std	57300	347449	280350	
00911	66428	392236	313525	0
00915	63039	350996	285025	0
00916	62723	347226	279306	0

the acceptable QC range is 50 - 200% of the
appropriate standard

ISTD 1 denotes bromochloromethane
ISTD 2 denotes 1,4-difluorobenzene
ISTD 3 denotes chlorobenzene-d5

Table 2.15 Results of the Blank Spike Analysis for the TCLP Analysis of the Drum Solid Samples
WA # 0-098 Pier Drum

Compound	Sample Conc (ug/l)	Spike Conc (ug/l)	Recovered Conc (ug/l)	% Recovery (ug/l)	QC Limits
1,1-Dichloroethene	24	20	48	120	61-145
Benzene	25	20	50	125 *	71-120
Trichloroethene	21	20	42	105	76-127
Toluene	24	20	48	120	76-125
Chlorobenzene	24	20	48	120	75-130

Table 2.16 Results of the MS/MSD Analysis for the TCLP VOA Analysis of the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID: 00911

2 1 3 100

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	RPD	QC Limits RPD	Rec.
1,1-Dichloroethene	100000	ND	113360	113	112040	112	1	14	61-145
Trichloroethene	100000	ND	96780	97	97140	97	0	14	71-120
Benzene	100000	ND	114140	114	115080	115	1	11	76-127
Toluene	100000	3140	110880	108	111220	108	0	13	76-125
Chlorobenzene	100000	ND	109100	109	113700	114	4	13	75-130

QA/QC FOR BNA

Before extraction, each sample was spiked with a six component mixture of CLP surrogate standards consisting of nitrobenzene-d₅, 2-fluorobiphenyl, terphenyl-d₁₄, phenol-d₅, 2-fluorophenol, and 2,4,6-tribromophenol. The surrogate percent recoveries for the water samples, listed in Table 2.17, ranged from 27 to 125. Fifty-seven values out of sixty were within the acceptable QC limits.

The internal standard areas (for 1,4-dichlorobenzene-d₄, naphthalene-d₈, acenaphthene-d₁₀, phenanthrene-d₁₀, chrysene-d₁₂, perylene-d₁₂) for the water samples are also listed in Table 2.17. All ninety-six areas are within the acceptable QC limits.

Samples CD 00640 and BE 00527 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, ranging from 37 to 84, are listed in Table 2.18. Twenty-one values out of twenty-two were within the acceptable QC limits. The relative percent differences (RPDs), also listed in Table 2.18, ranged from 2 to 18 and all 11 values were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.19, ranged from 70 to 109. All thirty-six values were within the acceptable QC limits.

The internal standard areas for the soil samples are also listed in Table 2.19. All thirty-six areas are within the acceptable QC limits.

Sample A 00644 was chosen for the MS/MSD analyses for the soil samples. The percent recoveries, ranging from 69 to 108, are listed in Table 2.20. Eighteen out of twenty-two values were within the acceptable QC limits. The RPDs, also listed in Table 2.20, ranged from 1 to 20 and all eleven values were within the acceptable QC limits.

The surrogate percent recoveries for the TCLP samples, listed in Table 2.21, ranged from 40 to 117. All thirty values were within the acceptable QC limits.

The internal standard areas for the TCLP samples are also listed in Table 2.21. All thirty areas are within the acceptable QC limits.

Sample BE 00527 was chosen for the MS/MSD analyses for the TCLP samples. The percent recoveries, ranging from 61 to 104, are listed in Table 2.22. Nineteen out of twenty-two values were within the acceptable QC limits. The RPDs, also listed in Table 2.22, ranged from 0 (zero) to 29 and ten out of eleven values were within the acceptable QC limits.

The surrogate percent recoveries for the drum liquid samples, listed in Table 2.23, ranged from 33 to 168. Thirty out of thirty-eight values were within the acceptable QC limits. Twenty-two other values were from diluted samples and the percent recoveries were not calculated.

The internal standard areas for the drum liquid samples are also listed in Table 2.23. Fifty-six out of sixty areas are within the acceptable QC limits.

Water blank WBLK021495 was chosen for the MS/MSD analyses for the drum liquid samples. The percent recoveries, ranging from 34 to 82, are listed in Table 2.24. All twenty-two values were within the acceptable QC limits. The RPDs, also listed in Table 2.24, ranged from 0 (zero) to 14 and all eleven values were within the acceptable QC limits.

The results of the initial calibration are listed in Table 2.25.

The results of the continuing calibration are listed in Table 2.26.

The samples and calibrations are correlated in Table 2.27.

The surrogate percent recoveries for the TCLP extracts of the drum solid samples, listed in Table 2.28, ranged from 11 to 111. Fifty out of fifty-one values were within the acceptable QC limits. Three other values were not calculated because of matrix interference in the sample. The value that exceeded the acceptable QC limit was also affected by matrix interference.

The internal standard areas for the TCLP extracts of the drum solid samples are listed in Table 2.29. Fifty-three out of fifty-four areas are within the acceptable QC limits.

The results of the blank spike analysis are listed in Table 2.30. The percent recoveries ranged from 42 to 150 and all eleven values were within the acceptable QC limits.

Sample 00915 was chosen for the MS/MSD analyses for the TCLP extracts of the drum solid samples. The percent recoveries, ranging from 12 to 95, are listed in Table 2.31. Twenty-one out of twenty-two values were within the acceptable QC limits. The RPDs, also listed in Table 2.31, ranged from 2 to 59 and seven out of eleven values were within the acceptable QC limits.

Table 2.17 Results of the Internal Standard Areas and Surrogate Recoveries for the Water Samples
WA # 0-098 Pier Drum

CAL CHECK 50 PPM BNA	>PD007	39875 250541	174384 250185	129444 296069	NA NA	NA NA	NA NA
WBLK011895	>PD010	31905 198702	142809 240967	102084 214443	27* 59	30* 70	46 76
CD00636	>PD011	30721 207842	133957 258949	95093 242135	75 71	85 79	62 94
CD00638	>PD012	33455 205400	145356 284653	124516 239478	94 84	88 102	69 125*
CD00641	>PD013	33306 230724	151794 294088	114365 254581	84 79	76 94	62 101
CD00635	>PD014	38167 238915	171288 292358	125508 274031	88 67	93 80	64 103
CD00639	>PD015	33135 228271	151576 255086	117413 248236	77 70	71 92	69 96
CD00640	>PD016	33189 202208	125163 228261	91698 234704	59 70	58 84	58 81
CD00640 MS	>PD017	32712 204117	138868 271469	107572 238689	57 73	56 85	53 90
CD00640 MSD	>PD018	32325 204579	135612 282333	107602 258520	49 77	48 80	46 88
CD00634	>PD019	34238 235951	153494 292426	116291 264288	91 90	90 94	68 97

SURROGATE LIMITS	WATER
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(35-114)
S4 (PHL) = Phenol-d5	(10-110)
S5 (2FP) = 2-Fluorophenol	(21-110)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Table 2.18 Results of the MS/MSD Analysis for the Water Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: CD00640

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	156.25	0.00	111.96	71	12- 89
2-Chlorophenol	156.25	0.00	115.54	73	27-123
1,4-Dichlorobenzene	78.13	0.00	32.21	41	36- 97
N-Nitroso-di-n-prop.(1)	78.13	0.00	40.69	52	41-116
1,2,4-Trichlorobenzene	78.13	0.00	33.85	43	39- 98
4-Chloro-3-methylphenol	156.25	0.00	120.71	77	23- 97
Acenaphthene	78.13	0.00	46.43	59	46-118
4-Nitrophenol	156.25	0.00	132.21	84 *	10- 80
2,4-Dinitrotoluene	78.13	0.00	49.25	63	24- 96
Pentachlorophenol	156.25	0.00	126.99	81	9-103
Pyrene	78.13	0.00	52.05	66	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	156.25	107.20	68	4	42 12- 89
2-Chlorophenol	156.25	118.39	75	2	40 27-123
1,4-Dichlorobenzene	78.13	29.13	37	10	28 36- 97
N-Nitroso-di-n-prop.(1)	78.13	37.15	47	10	38 41-116
1,2,4-Trichlorobenzene	78.13	34.41	44	2	28 39- 98
4-Chloro-3-methylphenol	156.25	131.69	84	8	42 23- 97
Acenaphthene	78.13	44.59	57	3	31 46-118
4-Nitrophenol	156.25	123.95	79	6	50 10- 80
2,4-Dinitrotoluene	78.13	47.13	60	4	38 24- 96
Pentachlorophenol	156.25	121.33	77	5	50 9-103
Pyrene	78.13	43.07	55	18	31 26-127

(1) N-Nitroso-di-n-propylamine

2 1 3.05

Table 2.19 Results of the Internal Standard Areas and Surrogate Recoveries for the Soil Samples
WA # 0-098 Pier Drum

Sample #	Data File	Internal Standards			Surrogates		
		1 4 area	2 5 area	3 6 area	NBZ PHL %	FBP 2FP %	TPH TBP %
CAL CHECK 50 PPM BNA	>PD021	38434	163272	120938	NA	NA	NA
		231504	234487	248960	NA	NA	NA
SBLK011395	>PD024	36298	150688	115900	92	96	65
		211649	278112	220347	87	87	99
A00642	>PD025	34691	152529	102508	80	102	77
		212295	243231	210899	79	90	104
A00643	>PD026	32854	138441	103061	96	101	76
		201910	229956	207427	98	106	108
A00644	>PD027	30669	142742	106559	77	84	70
		196969	241902	203685	85	79	97
A00644 MS	>PD028	31675	135866	97579	84	99	80
		189961	228494	200295	89	95	109
A00644 MSD	>PD029	26902	120589	99910	98	88	84
		191646	224721	192040	92	109	99

SURROGATE LIMITS	SOIL
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Table 2.20 Results of the MS/MSD Analysis for the Soil Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: A00644

Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	4065.04	0.00	4031.18	99 *	26- 90
2-Chlorophenol	4065.04	0.00	3646.30	89	25-102
1,4-Dichlorobenzene	2032.52	0.00	1573.13	77	28-104
N-Nitroso-di-n-prop.(1)	2032.52	0.00	1562.72	76	41-126
1,2,4-Trichlorobenzene	2032.52	0.00	1734.39	85	38-107
4-Chloro-3-methylphenol	4065.04	0.00	3996.10	98	26-103
Acenaphthene	2032.52	0.00	1900.73	93	31-137
4-Nitrophenol	4065.04	0.00	4204.63	103	11-114
2,4-Dinitrotoluene	2032.52	0.00	2018.82	99 *	28- 89
Pentachlorophenol	4065.04	0.00	2808.33	69	17-109
Pyrene	2032.52	0.00	1859.76	91	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	4065.04	4403.00	108 *	11	35 26- 90
2-Chlorophenol	4065.04	4025.73	99	10	50 25-102
1,4-Dichlorobenzene	2032.52	1813.58	89	14	27 28-104
N-Nitroso-di-n-prop.(1)	2032.52	1956.38	96	23	38 41-126
1,2,4-Trichlorobenzene	2032.52	1900.85	93	8	23 38-107
4-Chloro-3-methylphenol	4065.04	4116.00	101	5	33 26-103
Acenaphthene	2032.52	1874.71	92	1	19 31-137
4-Nitrophenol	4065.04	3982.72	97	6	50 11-114
2,4-Dinitrotoluene	2032.52	1871.91	92 *	7	47 28- 89
Pentachlorophenol	4065.04	3473.37	85	20	47 17-109
Pyrene	2032.52	1780.00	87	4	36 35-142

(1) N-Nitroso-di-n-propylamine

Table 2.21 Results of the Internal Standard Areas and Surrogate Recoveries for the TCLP Samples
WA # 0-098 Pier Drum

Sample #	Data File	Internal Standards			Surrogates		
		1 4 area	2 5 area	3 6 area	NBZ PHL %	FBP 2FP %	TPH TBP %
CAL CHECK 50 PPM BNA	>SM005	41021 241360	170697 258471	120567 300823	NA NA	NA NA	NA NA
WBLK011995	>PD001	38169 239769	144186 298718	115204 281582	81 40	75 48	66 82
B00525	>PD002	46924 290233	212640 364226	159659 351123	80 55	69 68	71 99
B00526	>PD003	38582 218230	175233 280286	111491 276763	77 46	81 69	74 98
BE00527	>PD004	41094 228236	165496 291819	129866 289160	75 54	66 59	65 91
CAL CHECK 50 PPM BNA	>PD007	39875 250541	174384 250185	129444 296069	NA NA	NA NA	NA NA
BE00527 MS	>PD008	41269 279101	199129 389251	146879 339551	93 94	93 100	67 117
BE00527 MSD	>PD009	46081 254658	192055 328287	144902 343633	89 77	82 87	72 115

SURROGATE LIMITS	WATER
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(35-114)
S4 (PHL) = Phenol-d5	(10-110)
S5 (2FP) = 2-Fluorophenol	(21-110)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Table 2.22 Results of the MS/MSD Analysis for the TCLP Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: BE00527

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	163.93	0.00	143.63	87	12- 89
2-Chlorophenol	163.93	0.00	165.60	101	27-123
1,4-Dichlorobenzene	81.97	0.00	67.38	82	36- 97
N-Nitroso-di-n-prop.(1)	81.97	0.00	79.75	97	41-116
1,2,4-Trichlorobenzene	81.97	0.00	62.72	76	39- 98
4-Chloro-3-methylphenol	163.93	0.00	143.73	87	23- 97
Acenaphthene	81.97	0.00	72.39	88	46-118
4-Nitrophenol	163.93	0.00	140.03	85 *	10- 80
2,4-Dinitrotoluene	81.97	0.00	78.62	95	24- 96
Pentachlorophenol	163.93	0.00	164.66	100	9-103
Pyrene	81.97	0.00	61.41	74	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	163.93	119.72	73	17	42 12- 89
2-Chlorophenol	163.93	135.11	82	20	40 27-123
1,4-Dichlorobenzene	81.97	50.14	61	29 *	28 36- 97
N-Nitroso-di-n-prop.(1)	81.97	63.38	77	22	38 41-116
1,2,4-Trichlorobenzene	81.97	52.04	63	18	28 39- 98
4-Chloro-3-methylphenol	163.93	132.14	80	8	42 23- 97
Acenaphthene	81.97	75.48	92	4	31 46-118
4-Nitrophenol	163.93	147.32	89 *	4	50 10- 80
2,4-Dinitrotoluene	81.97	78.42	95	0	38 24- 96
Pentachlorophenol	163.93	170.63	104 *	3	50 9-103
Pyrene	81.97	67.12	81	9	31 26-127

(1) N-Nitroso-di-n-propylamine

Table 2.23 Results of the Internal Standard Areas and Surrogate Recoveries for the Drum Liquid Samples
WA # 0-098 Pier Drum

Sample #	Data File	Internal Standards			Surrogates		
		1 4 area	2 5 area	3 6 area	NBZ PHL %	FBP 2FP %	TPH TBP %
CAL CHECK 50 PPM BNA	>PD050	27207 167961	123057 186638	88652 180600	NA NA	NA NA	NA NA
WBLK021495	>PD051	34901 203720	152328 257540	112436 219488	64 33	66 47	69 92
WBLK021495 MS	>PD052	40548 246256	177572 303794	122521 274396	69 35	79 54	65 91
WBLK021495 MSD	>PD053	42555 226030	178299 289916	127220 248586	74 34	79 55	68 107
00912	>PD054	58615*A 352873*A	223587 364098	170681 332488	D D	117* D	91 D
00913	>PD055	50428 244243	188345 249876	132366 215022	D D	D D	D D
00914	>PD056	63403*A 311429	143687 379043*A	167081 293695	168* 41	75 63	67 128*
CAL CHECK 50 PPM BNA	>PD057	36440 196978	144315 233759	101172 215437	NA NA	NA NA	NA NA
00912 10X	>PD058	59615 307077	252485 398538	161749 336595	D D	D D	D D
00913 10X	>PD059	55289 317671	249859 388136	162817 275650	D D	D D	D D
00914 10X	>PD060	50485 252995	197498 342917	139658 281060	115* 55	106 80	88 161*
CAL CHECK 50 PPM BNA	>PD033	52698 300028	217320 275807	145371 341122	NA NA	NA NA	NA NA
00913 (BOT	>PD040	45989 272996	201163 323814	149527 284291	113 111*	106 117*	79 123*

SURROGATE LIMITS

SOIL

S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Table 2.24 Results of the MS/MSD Analysis for the Drum Liquid Samples
WA # 0-098 Pier Drum

Matrix Spike - EPA Sample No.: WBLK021495

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	100.00	0.00	35.33	35	12- 89
2-Chlorophenol	100.00	0.00	69.64	69	27-123
1,4-Dichlorobenzene	50.00	0.00	28.44	56	36- 97
N-Nitroso-di-n-prop.(1)	50.00	0.00	36.47	72	41-116
1,2,4-Trichlorobenzene	50.00	0.00	28.00	56	39- 98
4-Chloro-3-methylphenol	100.00	0.00	77.21	77	23- 97
Acenaphthene	50.00	0.00	38.73	77	46-118
4-Nitrophenol	100.00	0.00	34.33	34	10- 80
2,4-Dinitrotoluene	50.00	0.00	39.86	79	24- 96
Pentachlorophenol	100.00	0.00	71.41	71	9-103
Pyrene	50.00	0.00	35.61	71	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	100.00	34.70	34	2	42 12- 89
2-Chlorophenol	100.00	71.36	71	2	40 27-123
1,4-Dichlorobenzene	50.00	27.87	55	1	28 36- 97
N-Nitroso-di-n-prop.(1)	50.00	34.29	68	5	38 41-116
1,2,4-Trichlorobenzene	50.00	29.83	59	5	28 39- 98
4-Chloro-3-methylphenol	100.00	77.82	77	0	42 23- 97
Acenaphthene	50.00	41.05	82	6	31 46-118
4-Nitrophenol	100.00	35.24	35	2	50 10- 80
2,4-Dinitrotoluene	50.00	38.89	77	2	38 24- 96
Pentachlorophenol	100.00	82.57	82	14	50 9-103
Pyrene	50.00	37.09	74	4	31 26-127

(1) N-Nitroso-di-n-propylamine

Table 2.25 Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: 888632
Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >GL090 >GL089 >GL088 >GL087 >GL086					RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF					
	20.00	50.00	80.00	120.00	160.00					
2-Fluorophenol	1.13319	1.22413	1.11533	1.02194	1.25164	.681	1.14925	7.988		
Phenol-d5	1.88930	1.78051	1.79691	1.65337	1.71369	.932	1.76675	5.046		
Phenol	2.17875	2.24561	2.14401	1.95778	2.14514	.935	2.13426	5.010	*	
bis(-2-Chloroethyl)Ether	1.82716	1.70006	1.65671	1.44631	1.44710	.948	1.61547	10.295		
2-Chlorophenol	1.62981	1.60918	1.54589	1.24925	1.42667	.953	1.49216	10.534		
1,3-Dichlorobenzene	1.76580	1.52513	1.54347	1.35242	1.37653	.989	1.51267	10.932		
1,4-Dichlorobenzene	1.74807	1.66364	1.65316	1.36267	1.36087	1.004	1.55768	11.722	*	
Benzyl alcohol	1.75264	1.61182	1.61923	1.45491	1.48904	1.055	1.58553	7.471		
1,2-Dichlorobenzene	1.72186	1.47504	1.44760	1.16091	1.15616	1.056	1.39231	17.140		
2-Methylphenol	1.38898	1.46332	1.42301	1.19653	1.25385	1.096	1.34514	8.507		
bis(2-Chloroisopropyl)ether	3.99327	3.90325	4.01262	3.40084	3.57889	1.100	3.77777	7.237		
4-Methylphenol	1.66697	1.41573	1.24256	1.02896	1.25535	1.141	1.32191	17.918		
N-Nitroso-Di-n-propylamine	2.30631	1.97411	1.85097	1.82601	2.01124	1.143	1.99373	9.612	**	
Hexachloroethane	.56066	.56020	.47790	.42972	.47105	1.140	.49991	11.651		
Nitrobenzene-d5	.44382	.44849	.41265	.42927	.41924	.853	.43070	3.574		
Nitrobenzene	.51451	.50006	.46011	.45953	.43566	.857	.47397	6.830		
Isophorone	1.04231	.99043	.92646	.98080	.99973	.909	.98795	4.214		
2-Nitrophenol	.25557	.28605	.23798	.24043	.22613	.925	.24923	9.265	*	
2,4-Dimethylphenol	.33113	.36608	.32878	.33612	.30239	.944	.33290	6.821		
bis(2-Chloroethoxy)methane	.59820	.57447	.51769	.50943	.52076	.964	.54411	7.289		
2,4-Dichlorophenol	.36826	.35234	.33708	.34390	.30268	.977	.34085	7.133	*	
1,2,4-Trichlorobenzene	.36276	.39848	.33845	.31560	.30452	.993	.34396	10.990		
Naphthalene	1.25299	1.14715	1.02734	.91575	.95318	1.005	1.05928	13.193		
4-Chloroaniline	.56557	.57445	.50288	.52249	.45405	1.028	.52389	9.358		
Hexachlorobutadiene	.21860	.22318	.18806	.19862	.16995	1.048	.19968	11.001	*	
4-Chloro-3-methylphenol	.47239	.45019	.42508	.39662	.38289	1.141	.42543	8.683	*	
2-Methylnaphthalene	.74715	.75329	.61199	.59383	.58603	1.157	.65846	12.806		
Hexachlorocyclopentadiene	.34624	.32617	.36041	.32367	.36697	.869	.34469	5.675	**	
2,4,6-Trichlorophenol	.45783	.47252	.44975	.36503	.42045	.884	.43312	9.820	*	
2,4,5-Trichlorophenol	.51589	.52531	.52369	.38522	.42932	.889	.47589	13.584		

RF - Response Factor (Subscript is amount in ng/ul)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.25 (Cont) Results of the Initial Calibration
WA # 0-098 Pier Drum

Instrument ID: 888632
Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >GL090 >GL089 >GL088 >GL087 >GL086					RRT	RF	% RSD	CCC	SPCC
	RF	RF	RF	RF	RF					
	20.00	50.00	80.00	120.00	160.00					
2-Chloronaphthalene	1.34685	1.29151	1.15291	.95044	1.02261	.909	1.15286	14.695		
2-Fluorobiphenyl	1.39267	1.24336	1.25919	.94988	1.01710	.897	1.17244	15.653		
2-Nitroaniline	.60778	.57489	.58188	.50323	.53797	.936	.56115	7.285		
Dimethylphthalate	1.90781	1.71106	1.66797	1.37395	1.33165	.972	1.59849	15.157		
Acenaphthylene	2.51035	2.12355	2.06257	1.47625	1.51203	.975	1.93695	22.684		
3-Nitroaniline	.81753	.81116	.79192	.64567	.66796	1.003	.74685	11.127		
Acenaphthene	1.47330	1.41583	1.15309	.97746	.94646	1.006	1.19323	20.402	*	
2,4-Dinitrophenol	.25361	.30462	.32098	.31292	.33168	1.018	.30476	9.940		**
4-Nitrophenol	.51513	.50113	.50027	.42020	.44969	1.034	.47728	8.478		**
Dibenzofuran	2.16917	1.94867	1.99636	1.51699	1.57006	1.031	1.84025	15.413		
2,6-Dinitrotoluene	.43148	.42552	.45502	.36978	.39788	.983	.41593	7.899		
2,4-Dinitrotoluene	.67089	.65597	.68474	.54380	.63087	1.043	.63725	8.776		
Diethylphthalate	2.10685	1.72715	1.52978	1.01751	1.05150	1.085	1.48656	31.079		
4-Chlorophenyl-phenylether	.91730	.86277	.76036	.65770	.60591	1.089	.76081	17.327		
Fluorene	1.54321	1.40943	1.24610	.97477	.96797	1.085	1.22830	20.929		
4-Nitroaniline	.59544	.65004	.61573	.54895	.57137	1.102	.59631	6.565		
4,6-Dinitro-2-methylphenol	.20371	.20695	.22258	.20540	.19005	.900	.20574	5.624		
N-Nitrosodiphenylamine	.70111	.55363	.53611	.41026	.33753	.903	.50773	27.640	*	
2,4,6-Tribromophenol	.20633	.17349	.17572	.15391	.15263	.916	.17241	12.627		
4-Bromophenyl-phenylether	.32866	.25835	.25454	.24703	.21657	.946	.26103	15.791		
Hexachlorobenzene	.40076	.33396	.31531	.30145	.28440	.963	.32717	13.748		
Pentachlorophenol	.27075	.25754	.22043	.22780	.21471	.987	.23825	10.300	*	
Phenanthrene	1.44672	1.13432	1.07865	.95399	.92722	1.004	1.10818	18.749		
Anthracene	1.51404	1.27836	1.13613	.97674	.93599	1.009	1.16825	20.227		
Carbazole	1.47191	1.19590	1.13787	1.00621	1.06122	1.033	1.17462	15.431		
Di-n-butylphthalate	2.35657	1.71161	1.68763	1.38343	1.34376	1.089	1.69660	23.914		
Fluoranthene	1.79273	1.48436	1.34759	1.16479	1.20095	1.156	1.39808	18.202	*	
Pyrene	1.54482	1.45448	1.53935	1.49885	1.67248	.883	1.54199	5.285		
Terphenyl-d14	1.16815	1.04287	1.25341	1.11861	1.23621	.901	1.16385	7.436		
Butylbenzylphthalate	.91649	.82759	.90642	.90127	.97141	.954	.90464	5.677		
3,3'-Dichlorobenzidine	.57520	.56042	.57350	.53587	.55577	1.000	.56015	2.842		
Benzo(a)anthracene	1.67189	1.40350	1.63637	1.49664	1.66338	.998	1.57436	7.550		
Bis(2-Ethylhexyl)phthalate	1.27749	1.17214	1.18248	1.12011	1.23179	1.011	1.19680	5.019		
Chrysene	1.42418	1.32052	1.26341	1.26285	1.35390	1.003	1.32497	5.111		
Di-n-octylphthalate	2.13351	1.84586	1.77561	1.61062	1.56698	.936	1.78652	12.616	*	
Benzo(b)fluoranthene	1.57959	1.60972	1.38113	1.55753	1.35090	.965	1.49577	8.047		
Benzo(k)fluoranthene	1.42183	1.15037	1.13529	.95476	.70713	.968	1.07387	24.611		
Benzo(a)pyrene	1.39270	1.27938	1.28887	1.25669	1.24855	.995	1.29324	4.482	*	
Indeno(1,2,3-cd)pyrene	1.51908	1.48182	1.30132	1.28957	1.33280	1.128	1.38492	7.759		
Dibenzo(a,h)anthracene	1.06802	.95635	.84996	.87604	.92602	1.132	.93528	9.094		
Benzo(g,h,i)perylene	1.43263	1.25439	1.16012	1.15408	1.16585	1.167	1.23341	9.624		

RF - Response Factor (Subscript is amount in ng/ul)

RRT - Average Relative Retention Time (RT Std/RT Istd)

RF - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/27/95

Time: 10:42

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.08407	5.67		
Phenol-d5	1.76675	1.65681	6.22		
Phenol	2.13426	1.93733	9.23	*	
bis(-2-Chloroethyl)Ether	1.61547	1.75268	8.49		
2-Chlorophenol	1.49216	1.54303	3.41		
1,3-Dichlorobenzene	1.51267	1.50633	.42		
1,4-Dichlorobenzene	1.55768	1.63957	5.26	*	
Benzyl alcohol	1.58553	1.59575	.64		
1,2-Dichlorobenzene	1.39231	1.44697	3.93		
2-Methylphenol	1.34514	1.36088	1.17		
bis(2-Chloroisopropyl)ether	3.77777	3.82251	1.18		
4-Methylphenol	1.32191	1.61184	21.93		
N-Nitroso-Di-n-propylamine	1.99373	1.91086	4.16		**
Hexachloroethane	.49991	.59293	18.61		
Nitrobenzene-d5	.43070	.45935	6.65		
Nitrobenzene	.47397	.49071	3.53		
Isophorone	.98795	.94881	3.96		
2-Nitrophenol	.24923	.27309	9.57	*	
2,4-Dimethylphenol	.33290	.33715	1.28		
bis(2-Chloroethoxy)methane	.54411	.62091	14.11		
2,4-Dichlorophenol	.34085	.36575	7.31	*	
1,2,4-Trichlorobenzene	.34396	.40767	18.52		
Naphthalene	1.05928	1.05871	.05		
4-Chloroaniline	.52389	.58713	12.07		
Hexachlorobutadiene	.19968	.27619	38.32	*	
4-Chloro-3-methylphenol	.42543	.47345	11.29	*	
2-Methylnaphthalene	.65846	.74233	12.74		
Hexachlorocyclopentadiene	.34469	.41459	20.28		**
2,4,6-Trichlorophenol	.43312	.51414	18.71	*	
2,4,5-Trichlorophenol	.47589	.56808	19.37		
2-Chloronaphthalene	1.15286	1.24447	7.95		
2-Fluorobiphenyl	1.17244	1.29747	10.66		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/27/95

Time: 10:42

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.63065	12.38		
Dimethylphthalate	1.59849	1.79658	12.39		
Acenaphthylene	1.93695	2.00684	3.61		
3-Nitroaniline	.74685	.81377	8.96		
Acenaphthene	1.19323	1.28618	7.79	*	
2,4-Dinitrophenol	.30476	.29768	2.32		**
4-Nitrophenol	.47728	.45871	3.89		**
Dibenzofuran	1.84025	1.88004	2.16		
2,6-Dinitrotoluene	.41593	.45206	8.68		
2,4-Dinitrotoluene	.63725	.62790	1.47		
Diethylphthalate	1.48656	1.64452	10.63		
4-Chlorophenyl-phenylether	.76081	.77358	1.68		
Fluorene	1.22830	1.31464	7.03		
4-Nitroaniline	.59631	.60980	2.26		
4,6-Dinitro-2-methylphenol	.20574	.22411	8.93		
N-Nitrosodiphenylamine	.50773	.59090	16.38	*	
2,4,6-Tribromophenol	.17241	.20206	17.19		
4-Bromophenyl-phenylether	.26103	.26870	2.94		
Hexachlorobenzene	.32717	.41524	26.92		
Pentachlorophenol	.23825	.26073	9.43	*	
Phenanthrene	1.10818	1.19842	8.14		
Anthracene	1.16825	1.26409	8.20		
Carbazole	1.17462	1.15933	1.30		
Di-n-butylphthalate	1.69660	1.63882	3.41		
Fluoranthene	1.39808	1.50420	7.59	*	
Pyrene	1.54199	1.48470	3.72		
Terphenyl-d14	1.16385	1.14176	1.90		
Butylbenzylphthalate	.90464	.78351	13.39		
3,3'-Dichlorobenzidine	.56015	.48883	12.73		
Benzo(a)anthracene	1.57436	1.45835	7.37		
Bis(2-Ethylhexyl)phthalate	1.19680	1.11442	6.88		
Chrysene	1.32497	1.25968	4.93		
Di-n-octylphthalate	1.78652	1.74477	2.34	*	
Benzo(b)fluoranthene	1.49577	1.57277	5.15		
Benzo(k)fluoranthene	1.07387	1.18389	10.24		
Benzo(a)pyrene	1.29324	1.23892	4.20	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.50375	8.58		
Dibenzo(a,h)anthracene	.93528	.95734	2.36		
Benzo(g,h,i)perylene	1.23341	1.34492	9.04		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/30/95

Time: 10:15

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.05456	8.24		
Phenol-d5	1.76675	1.74913	1.00		
Phenol	2.13426	1.89127	11.39	*	
bis(-2-Chloroethyl)Ether	1.61547	1.74696	8.14		
2-Chlorophenol	1.49216	1.44837	2.93		
1,3-Dichlorobenzene	1.51267	1.44315	4.60		
1,4-Dichlorobenzene	1.55768	1.72617	10.82	*	
Benzyl alcohol	1.58553	1.56684	1.18		
1,2-Dichlorobenzene	1.39231	1.43396	2.99		
2-Methylphenol	1.34514	1.41859	5.46		
bis(2-Chloroisopropyl)ether	3.77777	3.96260	4.89		
4-Methylphenol	1.32191	1.45029	9.71		
N-Nitroso-Di-n-propylamine	1.99373	2.03123	1.88		**
Hexachloroethane	.49991	.60415	20.85		
Nitrobenzene-d5	.43070	.45598	5.87		
Nitrobenzene	.47397	.48215	1.72		
Isophorone	.98795	.99758	.98		
2-Nitrophenol	.24923	.22927	8.01	*	
2,4-Dimethylphenol	.33290	.31393	5.70		
bis(2-Chloroethoxy)methane	.54411	.54835	.78		
2,4-Dichlorophenol	.34085	.34399	.92	*	
1,2,4-Trichlorobenzene	.34396	.42274	22.90		
Naphthalene	1.05928	1.13092	6.76		
4-Chloroaniline	.52389	.55768	6.45		
Hexachlorobutadiene	.19968	.25357	26.99	*	
4-Chloro-3-methylphenol	.42543	.46058	8.26	*	
2-Methylnaphthalene	.65846	.72369	9.91		
Hexachlorocyclopentadiene	.34469	.46478	34.84		**
2,4,6-Trichlorophenol	.43312	.43526	.50	*	
2,4,5-Trichlorophenol	.47589	.56839	19.44		
2-Chloronaphthalene	1.15286	1.19020	3.24		
2-Fluorobiphenyl	1.17244	1.22161	4.19		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/30/95

Time: 10:15

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.51861	7.58		
Dimethylphthalate	1.59849	1.62114	1.42		
Acenaphthylene	1.93695	1.98413	2.44		
3-Nitroaniline	.74685	.73415	1.70		
Acenaphthene	1.19323	1.17291	1.70	*	
2,4-Dinitrophenol	.30476	.29320	3.79		**
4-Nitrophenol	.47728	.41252	13.57		**
Dibenzofuran	1.84025	1.91479	4.05		
2,6-Dinitrotoluene	.41593	.40641	2.29		
2,4-Dinitrotoluene	.63725	.63428	.47		
Diethylphthalate	1.48656	1.52092	2.31		
4-Chlorophenyl-phenylether	.76081	.74583	1.97		
Fluorene	1.22830	1.29015	5.04		
4-Nitroaniline	.59631	.56504	5.24		
4,6-Dinitro-2-methylphenol	.20574	.22814	10.89		
N-Nitrosodiphenylamine	.50773	.52100	2.62	*	
2,4,6-Tribromophenol	.17241	.17573	1.92		
4-Bromophenyl-phenylether	.26103	.26972	3.33		
Hexachlorobenzene	.32717	.37776	15.46		
Pentachlorophenol	.23825	.26044	9.32	*	
Phenanthrene	1.10818	1.22965	10.96		
Anthracene	1.16825	1.16126	.60		
Carbazole	1.17462	1.12322	4.38		
Di-n-butylphthalate	1.69660	1.73809	2.45		
Fluoranthene	1.39808	1.55282	11.07	*	
Pyrene	1.54199	1.50998	2.08		
Terphenyl-d14	1.16385	1.22594	5.34		
Butylbenzylphthalate	.90464	.93655	3.53		
3,3'-Dichlorobenzidine	.56015	.59158	5.61		
Benzo(a)anthracene	1.57436	1.58749	.83		
Bis(2-Ethylhexyl)phthalate	1.19680	1.13984	4.76		
Chrysene	1.32497	1.32579	.06		
Di-n-octylphthalate	1.78652	1.91119	6.98	*	
Benzo(b)fluoranthene	1.49577	1.46600	1.99		
Benzo(k)fluoranthene	1.07387	1.28834	19.97		
Benzo(a)pyrene	1.29324	1.34918	4.33	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.52596	10.18		
Dibenzo(a,h)anthracene	.93528	1.06821	14.21		
Benzo(g,h,i)perylene	1.23341	1.38885	12.60		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/31/95
Time: 09:10
Laboratory ID: >PD021
Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.14648	.24		
Phenol-d5	1.76675	1.97690	11.89		
Phenol	2.13426	1.81058	15.17	*	
bis(-2-Chloroethyl)Ether	1.61547	1.77330	9.77		
2-Chlorophenol	1.49216	1.59342	6.79		
1,3-Dichlorobenzene	1.51267	1.59605	5.51		
1,4-Dichlorobenzene	1.55768	1.70840	9.68	*	
Benzyl alcohol	1.58553	1.61039	1.57		
1,2-Dichlorobenzene	1.39231	1.56561	12.45		
2-Methylphenol	1.34514	1.48279	10.23		
bis(2-Chloroisopropyl)ether	3.77777	3.96332	4.91		
4-Methylphenol	1.32191	1.53198	15.89		
N-Nitroso-Di-n-propylamine	1.99373	1.97419	.98		**
Hexachloroethane	.49991	.62472	24.97		
Nitrobenzene-d5	.43070	.46846	8.77		
Nitrobenzene	.47397	.52176	10.08		
Isophorone	.98795	.94999	3.84		
2-Nitrophenol	.24923	.24305	2.48	*	
2,4-Dimethylphenol	.33290	.34107	2.45		
bis(2-Chloroethoxy)methane	.54411	.58099	6.78		
2,4-Dichlorophenol	.34085	.37905	11.21	*	
1,2,4-Trichlorobenzene	.34396	.40697	18.32		
Naphthalene	1.05928	1.14423	8.02		
4-Chloroaniline	.52389	.58056	10.82		
Hexachlorobutadiene	.19968	.26853	34.48	*	
4-Chloro-3-methylphenol	.42543	.45285	6.44	*	
2-Methylnaphthalene	.65846	.78946	19.90		
Hexachlorocyclopentadiene	.34469	.41612	20.72		**
2,4,6-Trichlorophenol	.43312	.43538	.52	*	
2,4,5-Trichlorophenol	.47589	.56316	18.34		
2-Chloronaphthalene	1.15286	1.19866	3.97		
2-Fluorobiphenyl	1.17244	1.26700	8.06		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 01/31/95
Time: 09:10
Laboratory ID: >PD021
Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.57639	2.72		
Dimethylphthalate	1.59849	1.61186	.84		
Acenaphthylene	1.93695	2.03894	5.27		
3-Nitroaniline	.74685	.78791	5.50		
Acenaphthene	1.19323	1.24582	4.41	*	
2,4-Dinitrophenol	.30476	.23390	23.25		**
4-Nitrophenol	.47728	.41970	12.06		**
Dibenzofuran	1.84025	2.01334	9.41		
2,6-Dinitrotoluene	.41593	.35221	15.32		
2,4-Dinitrotoluene	.63725	.56946	10.64		
Diethylphthalate	1.48656	1.43015	3.79		
4-Chlorophenyl-phenylether	.76081	.75395	.90		
Fluorene	1.22830	1.29414	5.36		
4-Nitroaniline	.59631	.58732	1.51		
4,6-Dinitro-2-methylphenol	.20574	.19784	3.84		
N-Nitrosodiphenylamine	.50773	.62203	22.51	*	
2,4,6-Tribromophenol	.17241	.16515	4.21		
4-Bromophenyl-phenylether	.26103	.26797	2.66		
Hexachlorobenzene	.32717	.36098	10.33		
Pentachlorophenol	.23825	.24708	3.71	*	
Phenanthrene	1.10818	1.20302	8.56		
Anthracene	1.16825	1.27477	9.12		
Carbazole	1.17462	1.26220	7.46		
Di-n-butylphthalate	1.69660	1.73879	2.49		
Fluoranthene	1.39808	1.50273	7.48	*	
Pyrene	1.54199	1.57711	2.28		
Terphenyl-d14	1.16385	1.16126	.22		
Butylbenzylphthalate	.90464	.78159	13.60		
3,3'-Dichlorobenzidine	.56015	.48601	13.24		
Benzo(a)anthracene	1.57436	1.49186	5.24		
Bis(2-Ethylhexyl)phthalate	1.19680	1.17325	1.97		
Chrysene	1.32497	1.29057	2.60		
Di-n-octylphthalate	1.78652	2.09868	17.47	*	
Benzo(b)fluoranthene	1.49577	1.80656	20.78		
Benzo(k)fluoranthene	1.07387	1.23303	14.82		
Benzo(a)pyrene	1.29324	1.45138	12.23	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.55444	12.24		
Dibenzo(a,h)anthracene	.93528	1.08532	16.04		
Benzo(g,h,i)perylene	1.23341	1.41289	14.55		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/01/95

Time: 10:31

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.08586	5.52		
Phenol-d5	1.76675	1.76498	.10		
Phenol	2.13426	2.03069	4.85	*	
bis(-2-Chloroethyl)Ether	1.61547	1.74998	8.33		
2-Chlorophenol	1.49216	1.57731	5.71		
1,3-Dichlorobenzene	1.51267	1.60004	5.78		
1,4-Dichlorobenzene	1.55768	1.66518	6.90	*	
Benzyl alcohol	1.58553	1.66734	5.16		
1,2-Dichlorobenzene	1.39231	1.44442	3.74		
2-Methylphenol	1.34514	1.45549	8.20		
bis(2-Chloroisopropyl)ether	3.77777	4.04862	7.17		
4-Methylphenol	1.32191	1.43272	8.38		
N-Nitroso-Di-n-propylamine	1.99373	2.12021	6.34		**
Hexachloroethane	.49991	.57768	15.56		
Nitrobenzene-d5	.43070	.44100	2.39		
Nitrobenzene	.47397	.49535	4.51		
Isophorone	.98795	.95994	2.84		
2-Nitrophenol	.24923	.24054	3.49	*	
2,4-Dimethylphenol	.33290	.33119	.51		
bis(2-Chloroethoxy)methane	.54411	.57521	5.72		
2,4-Dichlorophenol	.34085	.37785	10.86	*	
1,2,4-Trichlorobenzene	.34396	.38351	11.50		
Naphthalene	1.05928	1.12401	6.11		
4-Chloroaniline	.52389	.55531	6.00		
Hexachlorobutadiene	.19968	.27706	38.75	*	
4-Chloro-3-methylphenol	.42543	.44106	3.67	*	
2-Methylnaphthalene	.65846	.75405	14.52		
Hexachlorocyclopentadiene	.34469	.38336	11.22		**
2,4,6-Trichlorophenol	.43312	.45149	4.24	*	
2,4,5-Trichlorophenol	.47589	.58722	23.40		
2-Chloronaphthalene	1.15286	1.22227	6.02		
2-Fluorobiphenyl	1.17244	1.26025	7.49		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/01/95

Time: 10:31

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.58069	3.48		
Dimethylphthalate	1.59849	1.68718	5.55		
Acenaphthylene	1.93695	2.09265	8.04		
3-Nitroaniline	.74685	.82760	10.81		
Acenaphthene	1.19323	1.17760	1.31	*	
2,4-Dinitrophenol	.30476	.20610	32.37		**
4-Nitrophenol	.47728	.44051	7.71		**
Dibenzofuran	1.84025	1.82085	1.05		
2,6-Dinitrotoluene	.41593	.40379	2.92		
2,4-Dinitrotoluene	.63725	.61157	4.03		
Diethylphthalate	1.48656	1.51714	2.06		
4-Chlorophenyl-phenylether	.76081	.80843	6.26		
Fluorene	1.22830	1.18262	3.72		
4-Nitroaniline	.59631	.62537	4.87		
4,6-Dinitro-2-methylphenol	.20574	.18640	9.40		
N-Nitrosodiphenylamine	.50773	.54509	7.36	*	
2,4,6-Tribromophenol	.17241	.17665	2.46		
4-Bromophenyl-phenylether	.26103	.28598	9.56		
Hexachlorobenzene	.32717	.34301	4.84		
Pentachlorophenol	.23825	.22768	4.44	*	
Phenanthrene	1.10818	1.26553	14.20		
Anthracene	1.16825	1.28609	10.09		
Carbazole	1.17462	1.24436	5.94		
Di-n-butylphthalate	1.69660	1.79358	5.72		
Fluoranthene	1.39808	1.57019	12.31	*	
Pyrene	1.54199	1.38891	9.93		
Terphenyl-d14	1.16385	1.05838	9.06		
Butylbenzylphthalate	.90464	.77666	14.15		
3,3'-Dichlorobenzidine	.56015	.52666	5.98		
Benzo(a)anthracene	1.57436	1.36025	13.60		
Bis(2-Ethylhexyl)phthalate	1.19680	1.10001	8.09		
Chrysene	1.32497	1.20796	8.83		
Di-n-octylphthalate	1.78652	2.00631	12.30	*	
Benzo(b)fluoranthene	1.49577	1.53461	2.60		
Benzo(k)fluoranthene	1.07387	1.31787	22.72		
Benzo(a)pyrene	1.29324	1.48035	14.47	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.50248	8.49		
Dibenzo(a,h)anthracene	.93528	1.00249	7.19		
Benzo(g,h,i)perylene	1.23341	1.34521	9.06		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/08/95
Time: 10:29
Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.17310	2.08		
Phenol-d5	1.76675	1.77192	.29		
Phenol	2.13426	1.86812	12.47	*	
bis(-2-Chloroethyl)Ether	1.61547	1.83714	13.72		
2-Chlorophenol	1.49216	1.57134	5.31		
1,3-Dichlorobenzene	1.51267	1.62652	7.53		
1,4-Dichlorobenzene	1.55768	1.60284	2.90	*	
Benzyl alcohol	1.58553	1.56492	1.30		
1,2-Dichlorobenzene	1.39231	1.39773	.39		
2-Methylphenol	1.34514	1.36788	1.69		
bis(2-Chloroisopropyl)ether	3.77777	3.70262	1.99		
4-Methylphenol	1.32191	1.43650	8.67		
N-Nitroso-Di-n-propylamine	1.99373	1.87177	6.12		**
Hexachloroethane	.49991	.59249	18.52		
Nitrobenzene-d5	.43070	.46100	7.04		
Nitrobenzene	.47397	.51998	9.71		
Isophorone	.98795	.99338	.55		
2-Nitrophenol	.24923	.21218	14.87	*	
2,4-Dimethylphenol	.33290	.32203	3.27		
bis(2-Chloroethoxy)methane	.54411	.58024	6.64		
2,4-Dichlorophenol	.34085	.37574	10.23	*	
1,2,4-Trichlorobenzene	.34396	.40331	17.25		
Naphthalene	1.05928	1.15242	8.79		
4-Chloroaniline	.52389	.55982	6.86		
Hexachlorobutadiene	.19968	.24501	22.70	*	
4-Chloro-3-methylphenol	.42543	.46786	9.97	*	
2-Methylnaphthalene	.65846	.70675	7.33		
Hexachlorocyclopentadiene	.34469	.43171	25.25		**
2,4,6-Trichlorophenol	.43312	.44355	2.41	*	
2,4,5-Trichlorophenol	.47589	.53020	11.41		
2-Chloronaphthalene	1.15286	1.23594	7.21		
2-Fluorobiphenyl	1.17244	1.29828	10.73		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/08/95

Time: 10:29

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum RF for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	RF	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.59087	5.30		
Dimethylphthalate	1.59849	1.71422	7.24		
Acenaphthylene	1.93695	2.15952	11.49		
3-Nitroaniline	.74685	.85054	13.88		
Acenaphthene	1.19323	1.24739	4.54	*	
2,4-Dinitrophenol	.30476	.27378	10.17		**
4-Nitrophenol	.47728	.46081	3.45		**
Dibenzofuran	1.84025	1.98320	7.77		
2,6-Dinitrotoluene	.41593	.45855	10.25		
2,4-Dinitrotoluene	.63725	.63862	.21		
Diethylphthalate	1.48656	1.42611	4.07		
4-Chlorophenyl-phenylether	.76081	.77920	2.42		
Fluorene	1.22830	1.32750	8.08		
4-Nitroaniline	.59631	.60793	1.95		
4,6-Dinitro-2-methylphenol	.20574	.21140	2.75		
N-Nitrosodiphenylamine	.50773	.58384	14.99	*	
2,4,6-Tribromophenol	.17241	.16740	2.91		
4-Bromophenyl-phenylether	.26103	.26985	3.38		
Hexachlorobenzene	.32717	.34086	4.18		
Pentachlorophenol	.23825	.22041	7.49	*	
Phenanthrene	1.10818	1.15992	4.67		
Anthracene	1.16825	1.16336	.42		
Carbazole	1.17462	1.16348	.95		
Di-n-butylphthalate	1.69660	1.55877	8.12		
Fluoranthene	1.39808	1.47840	5.74	*	
Pyrene	1.54199	1.59387	3.36		
Terphenyl-d14	1.16385	1.24072	6.60		
Butylbenzylphthalate	.90464	.93214	3.04		
3,3'-Dichlorobenzidine	.56015	.52524	6.23		
Benzo(a)anthracene	1.57436	1.53901	2.25		
Bis(2-Ethylhexyl)phthalate	1.19680	1.26832	5.98		
Chrysene	1.32497	1.33516	.77		
Di-n-octylphthalate	1.78652	1.93302	8.20	*	
Benzo(b)fluoranthene	1.49577	1.40245	6.24		
Benzo(k)fluoranthene	1.07387	1.20094	11.83		
Benzo(a)pyrene	1.29324	1.32356	2.34	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.44116	4.06		
Dibenzo(a,h)anthracene	.93528	.98106	4.89		
Benzo(g,h,i)perylene	1.23341	1.34109	8.73		

RF - Response Factor from daily standard file at 50.00 ng/ul

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/24/95

Time: 10:38

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.11077	3.35		
Phenol-d5	1.76675	1.78025	.76		
Phenol	2.13426	1.99234	6.65	*	
bis(-2-Chloroethyl)Ether	1.61547	1.78228	10.33		
2-Chlorophenol	1.49216	1.49923	.47		
1,3-Dichlorobenzene	1.51267	1.74437	15.32		
1,4-Dichlorobenzene	1.55768	1.70036	9.16	*	
Benzyl alcohol	1.58553	1.51099	4.70		
1,2-Dichlorobenzene	1.39231	1.75825	26.28		
2-Methylphenol	1.34514	1.52546	13.41		
bis(2-Chloroisopropyl)ether	3.77777	4.27058	13.04		
4-Methylphenol	1.32191	1.73935	31.58		
N-Nitroso-Di-n-propylamine	1.99373	2.17541	9.11		**
Hexachloroethane	.49991	.65727	31.48		
Nitrobenzene-d5	.43070	.45436	5.49		
Nitrobenzene	.47397	.47849	.95		
Isophorone	.98795	.97719	1.09		
2-Nitrophenol	.24923	.24116	3.24	*	
2,4-Dimethylphenol	.33290	.30837	7.37		
bis(2-Chloroethoxy)methane	.54411	.54747	.62		
2,4-Dichlorophenol	.34085	.31339	8.06	*	
1,2,4-Trichlorobenzene	.34396	.41359	20.24		
Naphthalene	1.05928	1.19560	12.87		
4-Chloroaniline	.52389	.50719	3.19		
Hexachlorobutadiene	.19968	.24194	21.16	*	
4-Chloro-3-methylphenol	.42543	.41921	1.46	*	
2-Methylnaphthalene	.65846	.76403	16.03		
Hexachlorocyclopentadiene	.34469	.40965	18.84		**
2,4,6-Trichlorophenol	.43312	.40334	6.87	*	
2,4,5-Trichlorophenol	.47589	.47672	.18		
2-Chloronaphthalene	1.15286	1.16981	1.47		
2-Fluorobiphenyl	1.17244	1.15068	1.86		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/24/95

Time: 10:38

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.51753	7.77		
Dimethylphthalate	1.59849	1.67345	4.69		
Acenaphthylene	1.93695	2.18496	12.80		
3-Nitroaniline	.74685	.78015	4.46		
Acenaphthene	1.19323	1.22196	2.41	*	
2,4-Dinitrophenol	.30476	.23414	23.17		**
4-Nitrophenol	.47728	.41196	13.69		**
Dibenzofuran	1.84025	1.78510	3.00		
2,6-Dinitrotoluene	.41593	.42342	1.80		
2,4-Dinitrotoluene	.63725	.61659	3.24		
Diethylphthalate	1.48656	1.54854	4.17		
4-Chlorophenyl-phenylether	.76081	.79115	3.99		
Fluorene	1.22830	1.28462	4.59		
4-Nitroaniline	.59631	.42477	28.77		
4,6-Dinitro-2-methylphenol	.20574	.21185	2.97		
N-Nitrosodiphenylamine	.50773	.56765	11.80	*	
2,4,6-Tribromophenol	.17241	.14815	14.07		
4-Bromophenyl-phenylether	.26103	.26116	.05		
Hexachlorobenzene	.32717	.34767	6.27		
Pentachlorophenol	.23825	.24062	.99	*	
Phenanthrene	1.10818	1.28922	16.34		
Anthracene	1.16825	1.10498	5.42		
Carbazole	1.17462	1.20880	2.91		
Di-n-butylphthalate	1.69660	1.87825	10.71		
Fluoranthene	1.39808	1.58180	13.14	*	
Pyrene	1.54199	1.55345	.74		
Terphenyl-d14	1.16385	1.03407	11.15		
Butylbenzylphthalate	.90464	.86691	4.17		
3,3'-Dichlorobenzidine	.56015	.49190	12.18		
Benzo(a)anthracene	1.57436	1.38007	12.34		
Bis(2-Ethylhexyl)phthalate	1.19680	1.27244	6.32		
Chrysene	1.32497	1.28708	2.86		
Di-n-octylphthalate	1.78652	2.34797	31.43	*	
Benzo(b)fluoranthene	1.49577	1.84985	23.67		
Benzo(k)fluoranthene	1.07387	1.06092	1.21		
Benzo(a)pyrene	1.29324	1.41909	9.73	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.66056	19.90		
Dibenzo(a,h)anthracene	.93528	1.04955	12.22		
Benzo(g,h,i)perylene	1.23341	1.47549	19.63		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/27/95

Time: 15:44

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Fluorophenol	1.14925	1.06731	7.13		
Phenol-d5	1.76675	1.68367	4.70		
Phenol	2.13426	1.86727	12.51	*	
bis(-2-Chloroethyl)Ether	1.61547	1.73528	7.42		
2-Chlorophenol	1.49216	1.42290	4.64		
1,3-Dichlorobenzene	1.51267	1.51627	.24		
1,4-Dichlorobenzene	1.55768	1.62937	4.60	*	
Benzyl alcohol	1.58553	1.70536	7.56		
1,2-Dichlorobenzene	1.39231	1.57515	13.13		
2-Methylphenol	1.34514	1.26173	6.20		
bis(2-Chloroisopropyl)ether	3.77777	3.67622	2.69		
4-Methylphenol	1.32191	1.57488	19.14		
N-Nitroso-Di-n-propylamine	1.99373	2.08075	4.36		**
Hexachloroethane	.49991	.62742	25.51		
Nitrobenzene-d5	.43070	.47644	10.62		
Nitrobenzene	.47397	.48122	1.53		
Isophorone	.98795	1.02135	3.38		
2-Nitrophenol	.24923	.25226	1.22	*	
2,4-Dimethylphenol	.33290	.33830	1.62		
bis(2-Chloroethoxy)methane	.54411	.55567	2.12		
2,4-Dichlorophenol	.34085	.34814	2.14	*	
1,2,4-Trichlorobenzene	.34396	.37559	9.20		
Naphthalene	1.05928	1.15502	9.04		
4-Chloroaniline	.52389	.49952	4.65		
Hexachlorobutadiene	.19968	.25132	25.86	*	
4-Chloro-3-methylphenol	.42543	.41846	1.64	*	
2-Methylnaphthalene	.65846	.73822	12.11		
Hexachlorocyclopentadiene	.34469	.42271	22.63		**
2,4,6-Trichlorophenol	.43312	.44168	1.98	*	
2,4,5-Trichlorophenol	.47589	.49643	4.32		
2-Chloronaphthalene	1.15286	1.28790	11.71		
2-Fluorobiphenyl	1.17244	1.24757	6.41		

RF - Response Factor from daily standard file at 50.00 ng/ul

 \overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.26 (Cont) Results of the Continuing Calibration
WA # 0-098 Pier Drum

Calibration Date: 02/27/95

Time: 15:44

Instrument ID: 888632

Initial Calibration Date: 11/04/94

Minimum \overline{RF} for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound	\overline{RF}	RF	%Diff	CCC	SPCC
2-Nitroaniline	.56115	.54620	2.66		
Dimethylphthalate	1.59849	1.68315	5.30		
Acenaphthylene	1.93695	1.99336	2.91		
3-Nitroaniline	.74685	.78099	4.57		
Acenaphthene	1.19323	1.25573	5.24	*	
2,4-Dinitrophenol	.30476	.28857	5.31		**
4-Nitrophenol	.47728	.48302	1.20		**
Dibenzofuran	1.84025	1.85246	.66		
2,6-Dinitrotoluene	.41593	.38472	7.50		
2,4-Dinitrotoluene	.63725	.68164	6.97		
Diethylphthalate	1.48656	1.66186	11.79		
4-Chlorophenyl-phenylether	.76081	.84581	11.17		
Fluorene	1.22830	1.58742	29.24		
4-Nitroaniline	.59631	.52456	12.03		
4,6-Dinitro-2-methylphenol	.20574	.21662	5.29		
N-Nitrosodiphenylamine	.50773	.58386	15.00	*	
2,4,6-Tribromophenol	.17241	.16254	5.73		
4-Bromophenyl-phenylether	.26103	.25402	2.68		
Hexachlorobenzene	.32717	.32820	.31		
Pentachlorophenol	.23825	.22684	4.79	*	
Phenanthrene	1.10818	1.31215	18.41		
Anthracene	1.16825	1.27305	8.97		
Carbazole	1.17462	1.17901	.37		
Di-n-butylphthalate	1.69660	1.78836	5.41		
Fluoranthene	1.39808	1.44906	3.65	*	
Pyrene	1.54199	1.37122	11.07		
Terphenyl-d14	1.16385	1.03607	10.98		
Butylbenzylphthalate	.90464	.81005	10.46		
3,3'-Dichlorobenzidine	.56015	.49881	10.95		
Benzo(a)anthracene	1.57436	1.32904	15.58		
Bis(2-Ethylhexyl)phthalate	1.19680	1.08716	9.16		
Chrysene	1.32497	1.12333	15.22		
Di-n-octylphthalate	1.78652	2.19489	22.86	*	
Benzo(b)fluoranthene	1.49577	1.55561	4.00		
Benzo(k)fluoranthene	1.07387	1.43412	33.55		
Benzo(a)pyrene	1.29324	1.43501	10.96	*	
Indeno(1,2,3-cd)pyrene	1.38492	1.63817	18.29		
Dibenzo(a,h)anthracene	.93528	1.07056	14.46		
Benzo(g,h,i)perylene	1.23341	1.50660	22.15		

RF - Response Factor from daily standard file at 50.00 ng/ul

\overline{RF} - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*)

SPCC - System Performance Check Compounds (**)

Table 2.27 Correlation of Samples and Calibrations

Samples	Initial Calibration	Continuing Calibration
WBLK10199402, PE10199402, SBLK10189402, PE10189402	11/4/94	-
A-C 00759 MS, A-C 00759 MSD, WBLK012695, A 00763, A-C 00764, A-C 00764 MS, A-C 00764 MSD, WBLK011995, B 00525, B 00526, BE 00527,	11/4/94	1/27/95
BE 00527 MS, BE 00527 MSD, WBLK011895 CD00636, CD 00638, CD 00641, CD 00635, CD 00639, CD 00640, CD 00640 MS, CD 00640 MSD, CD 00634, CD 00637	11/4/94	1/30/95
Soil Blank 011395, A 00642, A 00643, A 00644 A 00544 MS, A 00644 MSD	11/4/94	1/31/95
CD 00637	11/4/94	2/1/95
00913 Bott	11/4/94	2/8/95
WBLK 021495, WBLK 021495 MS, WBLK 021495 MSD 00912, 00913, 00914	11/4/94	2/24/95
00912 (10x), 00913 (10x), 00914 (10x)	11/4/94	2/27/95

Table 2.28 Results of the TCLP Surrogate Recoveries
for the Drum Solid Samples
WA # 0-098 Pier Drum

2 1 0013

Sample ID	S1 (NBZ)	S2 (FBP)	S3 (TPH)	S4 (PHL)	S5 (2FP)	S6 (DCB)	Total Out
SVBL	96	80	83	92	90	29	0
Blank MS	83	81	87	83	78	33	0
00915 MS	81	77	90	28	NC *	30	0
00915 MSD	97	91	94	22	NC *	87	0
00915 MSD (DL)	62	83	107	24	40	52	0
00911	111	60	106	38	11 *	52	1
00915	105	88	109	35	41	51	0
00916	105	92	104	41	NC *	55	0
00916 (DL)	62	94	100	22	38	53	0

* denotes a value that exceeds acceptable QC limits or was not calculated due to interferences

	QC Limits
S1 (NBZ) = Nitrobenzene-d5	35-114
S2 (FBP) = 2-Fluorobiphenyl	43-116
S3 (TPH) = Terphenyl-d14	33-141
S4 (PHL) = Phenol-d5	10-110
S5 (2FP) = 2-Fluorophenol	21-110
S6 (TBP) = 2,4,6-Tribromophenol	10-123

Table 2.29 Results of the TCLP Internal Standard Areas
for the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID	ISTD 1 AREA	ISTD 2 AREA	ISTD 3 AREA	ISTD 4 AREA	ISTD 5 AREA	ISTD 6 AREA	Total Out
50 ppb Std	103376	224687	174596	309920	342743	316065	
SVBL	71438	181814	142290	252376	274659	280804	0
Blank MS	94272	201407	159011	275722	294122	313972	0
00915 MS	77383	153471	135708	200609	232284	147786 *	1
50 ppb Std	36562	71918	55065	94027	106423	115678	
00911	22477	54062	44947	73695	75891	71327	0
00915	22207	54963	38462	67450	66021	60838	0
00916 (DL)	22480	54171	42739	75915	82155	85815	0
50 ppb Std	56461	134248	109038	205237	263060	266377	
00915 MSD	69824	152902	128184	225058	296468	352118	0
50 ppb Std	140686	346541	269300	517466	665774	690567	
00915 MSD (DL)	131600	328776	263640	499370	597000	514335	0
00916	143180	343181	290774	554723	746178	597680	0

The acceptable QC limits are 50 - 200% of the appropriate standard

ISTD 1 denotes 1,4-dichlorobenzene-d4
ISTD 2 denotes naphthalene-d8
ISTD 3 denotes acenaphthene-d10
ISTD 4 denotes phenanthrene-d10
ISTD 5 denotes chrysene-d12
ISTD 6 denotes perylene-d12

Table 2.30 Results of the Blank Spike Analysis for the TCLP BNA Analysis
WA # 0-098 Pier Drum

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	BS Recov. (ug/L)	% Recovery	QC Limits Rec.
1,2,4-Trichlorobenzene	100	ND	48	48	39-98
Acenaphthene	100	ND	79	79	46-118
2,4-Dinitrotoluene	100	ND	42	42	24-96
Pyrene	100	ND	104	104	26-127
N-Nitroso-di-n-propylamine	100	ND	61	61	41-116
1,4-Dichlorobenzene	100	ND	56	56	36-97
Pentachlorophenol	100	ND	73	73	9-103
Phenol	100	ND	143	143	12-110
2-Chlorophenol	100	ND	150	150	27-123
4-Chloro-3-methylphenol	100	ND	127	127	23-97
4-Nitrophenol	100	ND	67	67	10-80

Table 2.31 Results of the MS/MSD Analysis for the TCLP BNA Analysis of the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID: 00915

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	RPD	QC Limits RPD	Rec.
2-Chlorophenol	444	ND	302	68	264	59	14	40	27-123
Phenol	444	17	109	21	120	23	10	42	12-110
1,4-Dichlorobenzene	222	ND	87	39	128	58	39 *	28	36-97
N-Nitroso-di-n-propylamine	222	ND	140	63	146	66	4	38	41-116
1,2,4-Trichlorobenzene	222	ND	79	36 *	144	65	58 *	28	39-98
4-Chloro-3-methylphenol	444	ND	289	65	294	66	2	42	23-97
Acenaphthene	222	ND	162	73	154	69	5	31	46-118
4-Nitrophenol	444	ND	54	12	92	21	52 *	50	10-80
2,4-Dinitrotoluene	222	ND	93	42	170	77	59 *	38	24-96
Pentachlorophenol	444	ND	235	53	369	83	44	50	9-103
Pyrene	222	ND	211	95	105	47	66 *	31	26-127

2 1 3432

QA/QC FOR PESTICIDES/PCBs

Each sample was spiked with a solution of tetrachloro-m-xylene and decachlorobiphenyl as surrogates; percent recoveries for the water samples, listed in Table 2.32, ranged from 20 to 83. Nine out of twenty-two values were within the advisory QC limits.

Sample 00640 was chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, ranging from 50 to 88, are listed in Table 2.33. All twelve percent recoveries are within acceptable QC limits. The relative percent differences (RPDs), also listed in Table 2.33, ranged from 0 (zero) to 9 and all six values were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.34, ranged from 26 to 132. Sixteen out of eighteen values were within the advisory QC limits.

Samples 00642 and 00643 were chosen for the MS/MSD analyses for the soil samples. The percent recoveries, ranging from 22 to 152, are listed in Table 2.35. Twenty out of twenty-four percent recoveries were within the acceptable QC limits. The RPDs, also listed in Table 2.35, ranged from 2 to 131, and five out of twelve values were within the acceptable QC limits.

The surrogate percent recoveries for the TCLP samples, listed in Table 2.36, ranged from 19 to 95. Five out of twelve values were within the advisory QC limits.

Sample CF 00527 was chosen for the MS/MSD analyses for the TCLP samples. The percent recoveries, ranging from 64 to 109, are listed in Table 2.37. All twelve percent recoveries were within the acceptable QC limits. The RPDs, also listed in Table 2.37, ranged from 0 (zero) to 11, and all six values were within the acceptable QC limits.

The surrogate percent recoveries for the drum liquid samples, listed in Table 2.38, ranged from 14 to 76. One out of nine values were within the advisory QC limits. Five other values were not calculated due to matrix interference.

Sample WBLK020795 was chosen for the MS/MSD analyses for the drum liquid samples. The percent recoveries, ranging from 56 to 88, are listed in Table 2.39. All twelve percent recoveries were within the acceptable QC limits. The RPDs, also listed in Table 2.39, ranged from 0 (zero) to 13, and all six values were within the acceptable QC limits.

The surrogate percent recoveries for the PCB analysis of the TCLP extracts of the drum solids sample, listed in Table 2.40A, ranged from 26 to 87. All eight values were within the advisory QC limits. Two values were from diluted samples and the surrogate was not recovered.

The surrogate percent recoveries for the pesticide analysis of the TCLP extracts of the drum solids sample, listed in Table 2.40B, ranged from 42 to 121. All ten values were within the advisory QC limits.

The results of the blank spike, listed in Table 2.41, ranged from 52 to 100. Six out of seven percent recoveries were within the acceptable QC limits.

Sample 00911 was chosen for the MS/MSD for the pesticide analyses for the TCLP extracts of the drum solid samples. The percent recoveries, ranging from 14 to 182, are listed in Table 2.42. Six out of twelve percent recoveries were within the acceptable QC limits. The RPDs, also listed in Table 2.42, ranged from 44 to 124, and none of the six values were within the acceptable QC limits.

Sample 00916 was chosen for the MS/MSD for the PCB analyses for the TCLP extracts of the drum solid samples. The percent recoveries were 88 and 125 and are also listed in Table 2.42. Both percent recoveries were within the acceptable QC limits. The RPD, also listed in Table 2.42, was 35, and it was within the acceptable QC limits.

Table 2.32 Results of the Surrogate Recoveries in Water
WA # 0-098 Pier Drum

Sample ID	Percent Recovery	
	TCMX	DCBP
WBLK011795	29 *	62
EF 00636	51 *	83
EF 00638	36 *	80
EF 00641	33 *	64
EF 00635	41 *	69
EF 00639	20 *	58 *
EF 00640	25 *	64
EF 00640MS	43 *	70
EF 00640MSD	38 *	63
EF 00634	28 *	46 *
EF 00637	33 *	70

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	60-150
DCBP	60-150

Table 2.33 Results of the MS/MSD Analysis for Pest/PCB in Water
WA # 0-098 Pier Drum

2 0 3475

Sample ID: EF 00640

Compound	Sample Conc (µg/L)	MS			MSD			RPD	QC Limit	
		Spike Added (µg/L)	M S Conc (µg/L)	M S % Rec	Spike Added (µg/L)	M S D Conc (µg/L)	M S D % Rec		% Rec	RPD
g-BHC	ND	0.20	0.14	71	0.20	0.15	76	7	46-127	50
Heptachlor	ND	0.20	0.11	55	0.20	0.12	61	9	35-130	31
Aldrin	ND	0.20	0.10	50	0.20	0.10	50	0	34-132	43
Dieldrin	ND	0.40	0.27	68	0.40	0.29	73	7	31-134	38
Endrin	ND	0.40	0.30	76	0.40	0.32	81	6	42-139	45
p,p'-DDT	ND	0.40	0.34	86	0.40	0.35	88	3	23-134	50

Table 2.34 Results of the Surrogate Recoveries in Soil
WA # 0-098 Pier Drum

Sample ID	Percent Recovery	
	TCMX	DCBP
SBLK011395	117	110
A 00643	82	31 *
A 00643MS	94	126
A 00643MSD	68	26 *
A 00644	69	78
SBLK020795	98	132
A 00642	105	89
A 00642 MS	84	88
A 00642 MSD	98	101

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory
	QC
	Limits
TCMX	60-150
DCBP	60-150

Table 2.35 Results of the MS/MSD Analysis for Pest/PCB in Soil
WA # 0-098 Pier Drum

Sample ID: A 00643

Compound	Sample Conc (µg/Kg)	MS		M S Conc (µg/Kg)	M S % Rec	MSD		M S D Conc (µg/Kg)	M S D % Rec	RPD	QC Limit %	
		Spike Added (µg/Kg)				Spike Added (µg/Kg)					Rec	RPD
g-BHC	ND	25	28	112		25	18	72	43		46-127	50
Heptachlor	ND	25	26	104		25	15	60	54 *		35-130	31
Aldrin	ND	25	26	104		25	5	22 *	131 *		34-132	43
Dieldrin	ND	50	60	120		50	33	66	58 *		31-134	38
Endrin	ND	50	70	140 *		50	37	74	62 *		42-139	45
p,p'-DDT	ND	50	76	152 *		50	33	66	79 *		23-134	50

Sample ID: A 00642

Compound	Sample Conc (µg/Kg)	MS		M S Conc (µg/Kg)	M S % Rec	MSD		M S D Conc (µg/Kg)	M S D % Rec	RPD	QC Limit %	
		Spike Added (µg/Kg)				Spike Added (µg/Kg)					Rec	RPD
g-BHC	ND	25.6	18	70		25.6	21	82	15		46-127	50
Heptachlor	ND	25.6	20	78		25.6	22	86	10		35-130	31
Aldrin	ND	25.6	37	145 *		25.6	25	98	39		34-132	43
Dieldrin	ND	51.3	41	80		51.3	44	86	7		31-134	38
Endrin	ND	51.3	42	82		51.3	43	84	2		42-139	45
p,p'-DDT	ND	51.3	36	70		51.3	44	86	20		23-134	50

Table 2.36 Results of the Surrogate Recoveries in TCLP
WA # 0-098 Pier Drum

Sample ID	Percent Recovery	
	TCMX	DCBP
WBLK011995	19 *	49 *
C 00525	38 *	85
C 00526	25 *	78
C 00527	49 *	88
C 00527MS	47 *	86
C 00527MSD	48 *	95

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	60-150
DCBP	60-150

Table 2.37 Results of the MS/MSD Analysis for Pest/PCB in TCLP
WA # 0-098 Pier Drum

2 0 0430

Sample ID: CF 00527

Compound	Sample Conc ($\mu\text{g/L}$)	MS		M S Conc ($\mu\text{g/L}$)	M S % Rec	MSD		M S D Conc ($\mu\text{g/L}$)	M S D % Rec	RPD	QC Limit %	
		Spike Added ($\mu\text{g/L}$)				Spike Added ($\mu\text{g/L}$)					Rec	RPD
g-BHC	ND	0.22	0.18	82		0.22	0.20	91	11		46-127	50
Heptachlor	ND	0.22	0.14	64		0.22	0.15	68	7		35-130	31
Aldrin	ND	0.22	0.15	68		0.22	0.15	68	0		34-132	43
Dieldrin	ND	0.44	0.38	86		0.44	0.39	89	3		31-134	38
Endrin	ND	0.44	0.41	93		0.44	0.43	98	5		42-139	45
p,p'-DDT	ND	0.44	0.44	100		0.44	0.48	109	9		23-134	50

Table 2.38 Results of the Surrogate Recoveries in Drum Liquids
WA # 0-098 Pier Drum

WBLK020795	36 *	52 *
WBLK020795 MS	38 *	59 *
WBLK020795 MSD	38 *	76
00912	MI	MI
00913 Top layer	MI	MI
00913 Bottom Layer	14 *	MI
00914	23 *	51 *

TCMX denotes Tetrachloro-m-xylene

DCBP denotes Decachlorobiphenyl

	Advisory
	QC
	Limits
TCMX	60-150
DCBP	60-150

00174

Table 2.39 Results of the MS/MSD Analysis for Pest/PCB in Drum Liquids
WA # 0-098 Pier Drum

Sample ID: WBLK020795

Compound	Sample Conc ($\mu\text{g/L}$)	MS		MS Conc ($\mu\text{g/L}$)	MS % Rec	MSD		MSD Conc ($\mu\text{g/L}$)	MSD % Rec	RPD	QC Limit %	
		Spike Added ($\mu\text{g/L}$)	Added ($\mu\text{g/L}$)			Spike Added ($\mu\text{g/L}$)	Added ($\mu\text{g/L}$)				Rec	RPD
g-BHC	ND	0.125	0.090	72		0.125	0.100	80	11		56-123	15
Heptachlor	ND	0.125	0.070	56		0.125	0.080	64	13		40-131	20
Aldrin	ND	0.125	0.070	56		0.125	0.070	56	0		40-120	22
Dieldrin	ND	0.250	0.180	72		0.250	0.200	80	11		52-126	18
Endrin	ND	0.250	0.180	72		0.250	0.200	80	11		56-121	21
p,p'-DDT	ND	0.250	0.200	80		0.250	0.220	88	10		38-127	27

Table 2.40A Results of the Surrogate Recoveries
for the Drum Solid Samples
WA # 0-098 Pier Drum

2 2 0442

Sample ID	Percent Recovery of Dibutyl Chlorendate
Method Blank	87
Blank Spike	83
00916 MS	65
00916 MSD	49
00911	61
00911 (10x)	D
00915	46
00915 (10x)	D
00916	77
00916 (10x)	26

QC Limits

Dibutyl Chlorendate 24-143

Table 2.40B Results of the Surrogate Recoveries
for the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID	Percent Recovery of Dibutyl Chlorendate
Method Blank	81
Blank Spike	82
00911 MS	103
00911 MSD	42
00911	121
00911 (10x)	71
00915	94
00915 (10x)	114
00916	106
00916 (10x)	76

QC Limits

Dibutyl Chlorendate 25-154

Table 2.41 Results of the Blank Spike Analysis for the
Drum Solid Samples
WA # 0-098 Pier Drum

2 2 34 53

Parameter	Spike	Sample	MS	QC Limits	
	Added (ug/L)	Conc. (ug/L)	Recov. (ug/L)	% Recovery	Rec.
Lindane	0.5	ND	0.39	78	56-123
Aldrin	0.5	ND	0.37	74	40-120
Heptachlor	0.5	ND	0.34	68	40-131
Dieldrin	0.5	ND	0.40	80	52-126
Endrin	0.5	ND	0.26	52	*56-121
4,4'-DDT	0.5	ND	0.30	60	38-127
Aroclor1260	2.0	ND	2.0	100	20-150

Table 2.42 Results of the MS/MSD Analysis for the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID: 00911

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	QC Limits		
							RPD	RPD	Rec.
Lindane	2.50	ND	1.24	49 *	0.55	22 *	76 *	50	56-123
Aldrin	2.50	ND	1.99	79	0.96	40	66 *	43	40-120
Heptachlor	2.50	ND	4.14	166 *	2.65	106	44 *	31	40-131
Dieldrin	2.50	ND	1.50	60	0.35	14 *	124 *	38	52-126
Endrin	2.50	ND	4.55	182 *	2.33	93	65 *	45	56-121
4,4'-DDT	2.50	ND	1.31	52	0.62	25 *	72 *	50	38-127
Aroclor 1260**	10	ND	12.5	125	8.8	88	35	45	20-150

** denotes that sample 00916 was used

QA/QC FOR METALS

Quality control standards QCS/ICP-2, ERA-419, QC-19x100, TMMA #1 and TMMA #2 were used to check the accuracy of the calibration curve for the water samples. The percent recoveries ranged from 95 to 109 and all twenty-three percent recoveries were within the 95% confidence limits. The 95% confidence limits for ten values (QC-19x100) are not available. The percent recoveries for the water samples are listed in Table 2.43.

Samples A 00636 and B 00635 were chosen for matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, listed in Table 2.44, ranged from 65 to 127. Seventy out of seventy-six values were within the acceptable QC limits. The relative percent differences (RPDs), also listed in Table 2.44, ranged from 0 (zero) to 26. Thirty-seven out of thirty-eight values were within the acceptable QC limits.

The results of the blank spike analysis for the water samples are reported in Table 2.45. The percent recoveries ranged from 75 to 119. All twenty-three values were within the acceptable QC limits.

Quality control standards QCS/ICP-2, ERA-419, QC-19x100, TMMA #1 and TMMA #2 were used to check the accuracy of the calibration curve for the soil samples. The percent recoveries ranged from 98 to 127 and twenty-three out of twenty-four percent recoveries were within the 95% confidence limits. The 95% confidence limits for thirteen values (QC-19x100) are not available. The percent recoveries for the soil samples are listed in Table 2.46.

Sample A 00643 was chosen for matrix spike/matrix spike duplicate (MS/MSD) analyses for the soil samples. The percent recoveries, listed in Table 2.47, ranged from 62 to 109. The relative percent differences (RPDs), also listed in Table 2.47, ranged from 0 (zero) to 20. Quality control limits for the percent recoveries and the RPDs are not available.

The results of the blank spike analysis are reported in Table 2.48. The percent recoveries ranged from 82 to 114. Quality control limits for the percent recoveries are not available.

Quality control standards ERA-419, QC-7x100, QC-19x100, and TMMA #1 were used to check the accuracy of the calibration curve for the TCLP samples. The percent recoveries ranged from 95 to 108 and all eight percent recoveries were within the 95% confidence limits. The 95% confidence limits for four values (QC-7x100 and QC-19x100) are not available. The percent recoveries for the TCLP samples are listed in Table 2.49.

Samples A 00527 and A,D 00527 were chosen for MS/MSD analyses for the TCLP samples. The percent recoveries, listed in Table 2.50, ranged from 64 to 105. Fourteen out of sixteen values were within the acceptable QC limits. The RPDs, also listed in Table 2.50, ranged from 0 (zero) to 3. All eight values were within the acceptable QC limits.

The results of the blank spike analysis for the TCLP samples are reported in Table 2.51. The percent recoveries ranged from 97 to 109. All eight values were within the acceptable QC limits.

Quality control standards ERA-419, QC-7x100, QC-19x100, TMMA #1 and TMMA #2 were used to check the accuracy of the calibration curve for the drum liquid samples. The percent recoveries ranged from 94 to 121 and all eighteen recoveries were within the 95% confidence limits. The 95% confidence limits for seventeen values (QC-7x100 and QC-19x100) are not available. The percent recoveries for the drum liquid samples are listed in Table 2.52.

The results of the blank spike analysis for the drum liquid samples are reported in Table 2.53. The percent recoveries ranged from 95 to 246. Twenty-one out of twenty-two values were within the acceptable QC limits.

The results of the blank spike analysis for the analysis of the TCLP extracts of the drum solid samples are reported in Table 2.54. The percent recoveries ranged from 81 to 111 and all twenty-three values were within the acceptable QC limits.

Sample 00911 was chosen for MS/MSD analyses for the TCLP extracts of the drum solid samples. The percent recoveries, listed in Table 2.55, ranged from 63 to 118. Twenty-nine out of thirty-four values were within the acceptable QC limits. Ten values were not calculated because the concentration of analyte spiked was less than the concentration of analyte in the sample and two values were not calculated because of matrix interference. The RPDs, also listed in Table 2.55, ranged from 0 (zero) to 10. All seventeen values were within the acceptable QC limits. Five values were not calculated because the concentration of analyte spiked was less than the concentration of analyte in the sample and one value was not calculated because of matrix interference.

Table 2.43 Results of the QC Standard Analysis for Water Samples
WA # 0-098 Pier Drum

METAL	DATE ANALYZED	QUALITY CONTROL STANDARD	CONC. RECOVERED ug/l	TRUE VALUE ug/l	95 % CONFIDENCE INTERVAL	% RECOVERY
Aluminum	01/19/95	QCS/ICP-2	1059	1000	870 - 1100	106
	01/19/95	ERA 419	220	210	150 - 263	105
Antimony	01/17/95	TMMA #2	109	100	81.65-125.67	109
Arsenic	01/17/95	TMMA #1	49.0	50	41.9-55.9	98
Barium	01/19/95	QCS/ICP-2	1024	1000	890 - 1070	102
	01/19/95	ERA 419	202	204	167 - 241	99
Beryllium	01/19/95	QC-19 x100	1016	1000	N/A	102
	01/19/95	ERA 419	58	56	44 - 66	104
Cadmium	01/19/95	TMMA #1	5.20	5	4.10-5.83	104
Calcium	01/19/95	QC-19 x100	1005	1000	N/A	101
Chromium	01/18/95	TMMA #1	48.4	50	43.91-56.15	97
Cobalt	01/19/95	QC-19 x100	1021	1000	N/A	102
	01/19/95	ERA 419	110	103	85 - 122	107
Copper	01/19/95	QC-19 x100	1022	1000	N/A	102
	01/19/95	ERA 419	79	77	63 - 91	103
Iron	01/19/95	QC-19 x100	1039	1000	N/A	104
	01/19/95	ERA 419	131	125	93 - 147	105
Lead	01/19/95	TMMA #1	51.5	50	43.4-56.3	103
Magnesium	01/19/95	QC-19 x100	983	1000	N/A	98
Manganese	01/19/95	QC-19 x100	1016	1000	N/A	102
	01/19/95	ERA 419	126	122	100 - 144	103
Mercury	01/20/95	TMMA #1	1.9	2	1.40-2.49	95
Nickel	01/19/95	QC-19 x100	1026	1000	N/A	103
	01/19/95	ERA 419	97	92	75 - 110	105
Potassium	01/19/95	QCS/ICP-2	9519	10000	8750 - 11100	95
Selenium	01/17/95	TMMA #1	51	50	39.4-57.4	102
Silver	01/26/95	TMMA #1	10.2	10	8.44-11.8	102
Sodium	01/19/95	QCS/ICP-2	1015	1000	830 - 1470	102
Thallium	01/17/95	TMMA #2	51.4	50	39.9-57.97	103
Vanadium	01/19/95	QC-19 x100	989	1000	N/A	99
	01/19/95	ERA 419	136	135	111 - 160	101
Zinc	01/19/95	QC-19 x100	1009	1000	N/A	101
	01/19/95	ERA 419	121	113	93 - 133	107

Table 2.44 Results of the MS/MSD Analysis for Water Samples
WA # 0-098 Pier Drum

METAL	CLIENT#	SAMPLE ORIGINAL CONC		RECOVERED CONC		% RECOVERY		RPD RECOMMENDED		LIMIT	RPD
		CONC.	Spike	Dup.	Spike	Spike	Dup.	% Rec			
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l				
Aluminum	A00636	1230	2222	2222	3307	3356	93	96	2	75-125	20
Aluminum	B00635	1082	2222	2222	3222	3184	96	95	2	75-125	20
Antimony	A00636	0.600	55.6	55.6	68.8	64.4	123	115	7	75-125	20
Antimony	B00635	ND	55.6	55.6	58.3	62.4	105	112	7	75-125	20
Arsenic	A00636	3.50	55.6	55.6	73.8	69.8	127 *	119	6	75-125	20
Arsenic	B00635	2.80	55.6	55.6	60.2	60.4	103	104	0	75-125	20
Barium	A00636	18	556	556	564	572	98	100	1	75-125	20
Barium	B00635	17	556	556	573	564	100	98	2	75-125	20
Beryllium	A00636	ND	222	222	221	224	99	101	1	75-125	20
Beryllium	B00635	ND	222	222	225	222	101	100	1	75-125	20
Cadmium	A00636	0.050	55.6	55.6	68.0	64.0	122	115	6	75-125	20
Cadmium	B00635	0.070	55.6	55.6	60.4	61.6	109	111	2	75-125	20
Chromium	A00636	2.40	55.6	55.6	63.2	58.2	109	100	9	75-125	20
Chromium	B00635	1.10	55.6	55.6	55.2	57.4	97	101	4	75-125	20
Cobalt	A00636	3	222	222	221	226	98	100	2	75-125	20
Cobalt	B00635	1	222	222	228	223	102	100	2	75-125	20
Copper	A00636	ND	222	222	220	225	99	101	2	75-125	20
Copper	B00635	1	222	222	227	224	102	100	1	75-125	20
Iron	A00636	9431	2222	2222	11320	11360	85	87	2	75-125	20
Iron	B00635	9248	2222	2222	11270	11250	91	90	1	75-125	20
Lead	A00636	0.400	55.6	55.6	65.6	55.1	117	98	18	75-125	20
Lead	B00635	0.100	55.6	55.6	55.0	53.7	99	96	2	75-125	20
Manganese	A00636	4	222	222	218	222	96	98	2	75-125	20
Manganese	B00635	3	222	222	223	220	99	98	1	75-125	20
Mercury	A00636	0.1	2.00	2.00	2.10	2.00	100	95	5	75-125	20
Mercury	B00635	0.1	2.00	2.00	2.10	2.10	100	100	0	75-125	20
Nickel	A00636	ND	222	222	220	221	99	99	0	75-125	20
Nickel	B00635	ND	222	222	224	219	101	99	2	75-125	20
Selenium	A00636	0.90	55.6	55.6	55.3	51.2	98	91	8	75-125	20
Selenium	B00635	0.20	55.6	55.6	46.6	48.6	84	87	4	75-125	20
Silver	A00636	0.6	55.6	55.6	47.1	61	84	109	26 *	75-125	20
Silver	B00635	0.1	55.6	55.6	47.6	39.4	86	71 *	19	75-125	20
Thallium	A00636	ND	55.6	55.6	37.9	38.3	68 *	69 *	1	75-125	20
Thallium	B00635	ND	55.6	55.6	35.9	38.6	65 *	69 *	7	75-125	20
Vanadium	A00636	ND	556	556	543	550	98	99	1	75-125	20
Vanadium	B00635	ND	556	556	553	544	100	98	2	75-125	20
Zinc	A00636	ND	222	222	211	214	95	96	1	75-125	20
Zinc	B00635	ND	222	222	216	215	97	97	0	75-125	20

Table 2.45 Results of the Blank Spike Analysis for Water Samples
WA # 0-098 Pier Drum

METAL	Spiked Conc ug/l	RECOVERED CONC ug/l	% RECOVERY	RECOMMENDED LIMIT
Aluminum	2222	2145	97	75-125
Antimony	55.6	59.8	108	75-125
Arsenic	55.6	59.1	106	75-125
Barium	556	541	97	75-125
Beryllium	222	218	98	75-125
Cadmium	55.6	66.0	119	75-125
Calcium	2222	2284	103	75-125
Chromium	55.6	54.8	99	75-125
Cobalt	222	219	99	75-125
Copper	222	222	100	75-125
Iron	2222	2199	99	75-125
Lead	55.6	59.1	106	75-125
Magnesium	2222	2078	94	75-125
Manganese	222	215	97	75-125
Mercury	2.0	2.1	105	75-125
Nickel	222	220	99	75-125
Potassium	2222	1669	75	75-125
Selenium	55.6	56.8	102	75-125
Silver	55.6	60.2	108	75-125
Sodium	2222	2115	95	75-125
Thallium	55.6	52.2	94	75-125
Vanadium	556	539	97	75-125
Zinc	222	212	95	75-125

Table 2.46 Results of the QC Standard Analysis for Soil Samples
WA # 0-098 Pier Drum

2 2 0470

METAL	DATE ANALYZED	QUALITY CONTROL STANDARD	CONC. RECOVERED ug/l	TRUE VALUE ug/l	95 % CONFIDENCE INTERVAL	% RECOVERY
Aluminum	01/26/95	QCS/ICP-2	1071	1000	870 - 1100	107
	01/26/95	ERA-419	229	210	150 - 263	109
Antimony	01/30/95	TMMA #2	102	100	81.65-125.67	102
Arsenic	01/30/95	TMMA #1	50	50	41.9-55.9	100
Barium	01/26/95	QCS/ICP-2	1045	1000	890 - 1070	105
	01/26/95	ERA-419	204	204	167 - 241	100
Beryllium	01/26/95	QC-19 x100	1049	1000	N/A	105
	01/26/95	ERA-419	59	56	44 - 66	105
Cadmium	01/26/95	QC-19 x100	1041	1000	N/A	104
	01/26/95	ERA-419	106	98	75 - 115	108
Calcium	01/26/95	QC-19 x100	994	1000	N/A	99
Chromium	01/26/95	QC-19 x100	1076	1000	N/A	108
	01/26/95	ERA-419	1053	950	779 - 1120	111
Cobalt	01/26/95	QC-19 x100	1071	1000	N/A	107
	01/26/95	ERA-419	111	103	85 - 122	108
Copper	01/26/95	QC-19 x100	1042	1000	N/A	104
	01/26/95	ERA-419	80	77	63 - 91	104
Iron	01/26/95	QC-19 x100	1084	1000	N/A	108
	01/26/95	ERA-419	134	125	93 - 147	107
Lead	01/26/95	QC-19 x100	1053	1000	N/A	105
	01/26/95	ERA-419	104 *	82	65 - 97	127
Magnesium	01/26/95	QC-19 x100	1034	1000	N/A	103
Manganese	01/26/95	QC-19 x100	1052	1000	N/A	105
	01/26/95	ERA-419	130	122	100 - 144	107
Mercury	01/25/95	WP032 #2	4.0	3.89	2.87 - 5.02	103
Nickel	01/26/95	QC-19 x100	1078	1000	N/A	108
	01/26/95	ERA-419	103	92	75 - 110	112
Potassium	01/26/95	QCS/ICP-2	9763	10000	8750 - 11100	98
Selenium	01/31/95	TMMA #1	51	50	39.4-57.4	102
Silver	01/26/95	QCS/ICP-2	530	500	440 - 560	106
	01/26/95	ERA-419	42	42	29 - 49	100
Sodium	01/26/95	QCS/ICP-2	1019	1000	830 - 1470	102
Thallium	01/30/95	TMMA #2	56	50	39.9-57.97	112
Vanadium	01/26/95	QC-19 x100	1029	1000	N/A	103
	01/26/95	ERA-419	141	135	111 - 160	104
Zinc	01/26/95	QC-19 x100	1046	1000	N/A	105
	01/26/95	ERA-419	122	113	93 - 133	108

Table 2.47 Results of the MS/MSD Analysis for Soil Samples
WA # 0-098 Pier Drum

METAL	CLIENT#	SAMPLE ORIGINAL CONC		RECOVERED CONC		% RECOVERY		RPD	
		CONC. Spike mg/kg	Dup. mg/kg	Spike mg/kg	Dup. mg/kg	Spike	Dup.		
Antimony	A00643	ND	4.02	4.05	2.59	2.51	64	62	4
Arsenic	A00643	0.208	4.02	4.05	4.21	4.05	99	95	5
Barium	A00643	3.62	92.8	78.9	89.6	79.5	93	96	4
Beryllium	A00643	0.023	46.4	39.4	46.4	40.8	100	103	3
Cadmium	A00643	ND	46.4	39.4	46.8	39.9	101	101	0
Chromium	A00643	0.06	46.4	39.4	48.0	41.6	103	105	2
Cobalt	A00643	ND	46.4	39.4	47.1	40.9	101	104	2
Copper	A00643	ND	46.4	39.4	44.7	39.4	96	100	4
Lead	A00643	0.93	46.4	39.4	49.1	43.0	104	107	3
Manganese	A00643	ND	46.4	39.4	46.7	40.6	101	103	2
Mercury	A00643	ND	0.322	0.331	0.338	0.347	105	105	0
Nickel	A00643	0.16	46.4	39.4	48.1	41.9	103	106	2
Selenium	A00643	0.053	4.02	4.05	4.25	4.18	104	102	2
Silver	A00643	0.29	46.4	39.4	36.8	38.3	79	96	20
Thallium	A00643	0.010	4.02	4.05	3.88	3.98	96	98	2
Vanadium	A00643	ND	92.8	78.9	91.3	79.9	98	101	3
Zinc	A00643	ND	46.4	39.4	50.7	42.2	109	107	2

Table 2.48 Results of the Blank Spike Analysis for Soil Samples
WA # 0-098 Pier Drum

2 1 04.8.2

METAL	Spiked Conc mg/kg	Sand Blk Conc mg/kg	RECOVERED CONC mg/kg	% RECOVERY
Aluminum	400	17.9	472	114
Antimony	5.00	ND	4.12	82
Arsenic	5.00	ND	4.85	97
Barium	100	ND	101	101
Beryllium	50.0	ND	53.1	106
Cadmium	50.0	ND	51.4	103
Calcium	400	ND	429	107
Chromium	50.0	ND	53.3	107
Cobalt	50.0	ND	53.3	107
Copper	50.0	ND	51.5	103
Iron	400	30.7	451	105
Lead	50.0	1.83	52.6	102
Magnesium	400	ND	411	103
Manganese	50.0	ND	52.4	105
Mercury	0.400	ND	0.420	105
Nickel	50.0	ND	53.8	108
Potassium	400	8.17	365	89
Selenium	5.00	ND	5.04	101
Silver	50.0	ND	50.0	100
Sodium	400	ND	405	101
Thallium	5.00	ND	4.96	99
Vanadium	100	ND	104	104
Zinc	50.0	ND	54.7	109

Table 2.49 Results of the QC Standard Analysis for TCLP Samples
WA # 0-098 Pier Drum

METAL	DATE ANALYZED	QUALITY CONTROL STANDARD	CONC. RECOVERED ug/l	TRUE VALUE ug/l	95 % CONFIDENCE INTERVAL	% RECOVERY
Arsenic	02/01/95	TMMA #1	50.8	50	41.9-55.9	102
Barium	02/01/95	QC-7 x100	990	1000	N/A	99
	02/01/95	ERA 419	200	204	167 - 241	98
Cadmium	02/01/95	QC-19 x100	1014	1000	N/A	101
	02/01/95	ERA-419	104	98	75 - 115	106
Chromium	02/01/95	QC-19 x100	1031	1000	N/A	103
	02/01/95	ERA-419	1014	950	779 - 1120	107
Lead	02/02/95	TMMA #1	53.9	50	43.4-56.3	108
Mercury	01/20/95	TMMA #1	1.9	2	1.40-2.49	95
Selenium	02/01/95	TMMA #1	50.7	50	39.4-57.4	101
Silver	02/01/95	QC-7 x100	992	1000	N/A	99
	02/01/95	ERA 419	42	42	29 - 49	100

Table 2.50 Results of the MS/MSD Analysis for TCLP Samples
WA # 0-098 Pier Drum

2 2

3484

METAL	CLIENT#	SAMPLE		ORIGINAL CC		RECOVERED CONC.		% RECOVERY		RPD RECOMMENDED	
		CONC.	Spike	Dup.	Spike	Dup.	Spike	Dup.		LIMIT	RPD
		ug/l	ug/l	ug/l	ug/l	ug/l				% Rec	
Arsenic	A00527	0.9	55.6	55.6	57.8	59.2	102	105	2	75-125	20
Barium	A00527	11	556	556	570	578	101	102	1	75-125	20
Cadmium	A00527	ND	222	222	217	219	98	99	1	75-125	20
Chromium	A00527	2	222	222	224	226	100	101	1	75-125	20
Lead	A00527	ND	55.6	55.6	35.8	36.7	64 *	66 *	2	75-125	20
Mercury	A00527	0.1	2.00	2.00	2.10	2.10	100	100	0	75-125	20
Selenium	A00527	0.1	55.6	55.6	56.2	54.3	101	98	3	75-125	20
Silver	A,D00527	3	222	222	223	226	99	100	1	75-125	20

Table 2.51 Results of the Blank Spike Analysis for TCLP Samples
WA # 0-098 Pier Drum

METAL	Spiked Conc ug/l	RECOVERED CONC ug/l	% RECOVERY	RECOMMENDED LIMIT
Arsenic	55.6	59.1	106	75-125
Barium	556	551	99	75-125
Cadmium	222	215	97	75-125
Chromium	222	224	101	75-125
Lead	55.6	57.2	103	75-125
Mercury	2.00	2.10	105	75-125
Selenium	55.6	60.7	109	75-125
Silver	222	225	101	75-125

Table 2.52 Results of the QC Standard Analysis for Drum Liquid Samples
WA # 0-098 Pier Drum

METAL	DATE ANALYZED	QUALITY CONTROL STANDARD	CONC. RECOVERED ug/l	TRUE VALUE ug/l	95 % CONFIDENCE INTERVAL	% RECOVERY
Aluminum	02/13/95	QC-7 x100	1017	1000	N/A	102
	02/13/95	ERA 419	240	210	150 - 263	114
Antimony	02/08/95	TMMA #2	121	100	81.65-125.67	121
Arsenic	02/08/95	TMMA #1	50.9	50	41.9-55.9	102
Barium	02/13/95	QC-7 x100	987	1000	N/A	99
	02/13/95	ERA 419	191	204	167 - 241	94
Beryllium	02/13/95	QC-19 x100	1018	1000	N/A	102
	02/13/95	ERA 419	55	56	44 - 66	98
Cadmium	02/13/95	QC-19 x100	1017	1000	N/A	102
	02/13/95	ERA 419	100	97.7	75-115	102
Calcium	02/13/95	QC-19 x100	1022	1000	N/A	102
Chromium	02/13/95	QC-19 x100	1032.0	1000	N/A	103
	02/13/95	ERA 419	979	950	779-1120	103
Cobalt	02/13/95	QC-19 x100	1025	1000	N/A	103
	02/13/95	ERA 419	106	103	85 - 122	103
Copper	02/13/95	QC-19 x100	1015	1000	N/A	102
	02/13/95	ERA 419	75	77	63 - 91	97
Iron	02/13/95	QC-19 x100	1045	1000	N/A	105
	02/13/95	ERA 419	128	125	93 - 147	102
Lead	02/14/95	TMAA#1	51	50	43.4-56.3	101
Magnesium	02/13/95	QC-19 x100	1005	1000	N/A	101
Manganese	02/13/95	QC-19 x100	1021	1000	N/A	102
	02/13/95	ERA 419	122	122	100 - 144	100
Nickel	02/13/95	QC-19 x100	1034	1000	N/A	103
	02/13/95	ERA 419	96	92	75 - 110	104
Potassium	02/13/95	QC-7 x100	9787	10000	N/A	98
Selenium	02/08/95	TMMA #1	53	50	39.4-57.4	106
Silver	02/13/95	QC-7 x100	996.0	1000	N/A	100
	02/13/95	ERA 419	40	41.8	29-49	96
Sodium	02/13/95	QC-7 x100	995	1000	N/A	100
Thallium	01/17/95	TMMA #2	52.8	50	39.9-57.97	106
Vanadium	02/13/95	QC-19 x100	979	1000	N/A	98
	02/13/95	ERA 419	130	135	111 - 160	96
Zinc	02/13/95	QC-19 x100	1012	1000	N/A	101
	02/13/95	ERA 419	120	113	93 - 133	106

Table 2.53 Results of the Blank Spike Analysis for Drum Liquid Samples
WA # 0-098 Pier Drum

METAL	Spiked Conc ug/l	RECOVERED CONC ug/l	% RECOVERY	RECOMMENDED LIMIT
Aluminum	2000	1971	99	75-125
Antimony	50.0	57.0	114	75-125
Arsenic	50.0	54.9	110	75-125
Barium	500	485	97	75-125
Beryllium	200	199	100	75-125
Cadmium	200	191	96	75-125
Calcium	2000	3069	153	75-125
Chromium	200	203	102	75-125
Cobalt	200	196	98	75-125
Copper	200	202	101	75-125
Iron	2000	2028	101	75-125
Lead	50.0	58.7	117	75-125
Magnesium	2000	1986	99	75-125
Manganese	200	198	99	75-125
Nickel	200	204	102	75-125
Potassium	2000	2107	105	75-125
Selenium	50.0	56.6	113	75-125
Silver	200	190	95	75-125
Sodium	2000	2033	102	75-125
Thallium	50.0	53.2	106	75-125
Vanadium	500	490	98	75-125
Zinc	200	491 **	246 *	75-125

** High recovery could be contaminated

Table 2.54 Results of the Blank Spike Analysis for the Drum Solid Samples
WA # 0-098 Pier Drum

2 1 3773

Parameter	Spike Added	Sample Conc.	BS Recov.	% Recovery	QC Limits
	(ug/L)	(ug/L)	(ug/L)		Rec.
Aluminum	10000	ND	9640	96	75-125
Antimony	50	ND	48.5	97	75-125
Arsenic	25	ND	23.8	95	75-125
Barium	5000	ND	5180	104	75-125
Beryllium	4.0	ND	3.53	88	75-125
Cadmium	10.0	ND	9.6	96	75-125
Calcium	1000	ND	950	95	75-125
Chromium	1000	ND	810	81	75-125
Cobalt	1000	ND	1030	103	75-125
Copper	1000	ND	980	98	75-125
Iron	1000	ND	1050	105	75-125
Lead	25	ND	25.5	102	75-125
Magnesium	250	ND	250	100	75-125
Manganese	1000	ND	1110	111	75-125
Mercury	5.0	ND	4.82	96	75-125
Nickel	1000	ND	1040	104	75-125
Potassium	1000	ND	1050	105	75-125
Selenium	25	ND	25.1	100	75-125
Silver	1000	ND	970	97	75-125
Sodium	250	ND	260	104	75-125
Thallium	25	ND	22.6	90	75-125
Vanadium	10000	ND	10300	103	75-125
Zinc	250	ND	260	104	75-125

Table 2.55 Results of the MS/MSD Analysis for the TCLP Analysis of the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID: 00911

2 0459

Analyte	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	RPD	QC Limits RPD	Rec.
Aluminum	10000	ND	8280	83	8440	84	2	20 75-125	
Antimony	50	ND	39.3	79	37.1	74 *	6	20 75-125	
Arsenic	25	ND	25.4	102	24.5	98	4	20 75-125	
Barium	5000	ND	5370	107	5370	107	0	20 75-125	
Beryllium	4.0	ND	4.72	118	4.50	113	5	20 75-125	
Cadmium	10.0	167	182	NC	182	NC	NC	20 75-125	
Calcium	1000	435000	447000	NC	438000	NC	NC	20 75-125	
Chromium	1000	ND	910	91	900	90	1	20 75-125	
Cobalt	1000	470	1290	82	1290	82	0	20 75-125	
Copper	1000	ND	980	98	980	98	0	20 75-125	
Iron	1000	2190	3080	89	3100	91	2	20 75-125	
Lead	25	102	136	NC	138	NC	NC	20 75-125	
Magnesium	250	4300	4400	NC	4300	NC	NC	20 75-125	
Manganese	1000	350	1400	105	1410	106	1	20 75-125	
Mercury	5.0	ND	4.85	97	4.94	99	2	20 75-125	
Nickel	1000	ND	1030	103	1030	103	0	20 75-125	
Potassium	1000	4200	5300	110	5200	100	10	20 75-125	
Selenium	25	ND	16.1	64 *	15.7	63 *	3	20 75-125	
Silver	1000	ND	960	96	950	95	1	20 75-125	
Sodium	250	3100000	3200000	NC	2800000	NC	NC	20 75-125	
Thallium	25	ND	ND	MI	ND	MI	MI	20 75-125	
Vanadium	10000	ND	7680	77	7670	77	0	20 75-125	
Zinc	250	440	620	72 *	620	72 *	0	20 75-125	

Table 2.55 Results of the MS/MSD Analysis for the TCLP Analysis of the Drum Solid Samples
WA # 0-098 Pier Drum

Sample ID: 00911

Analyte	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Recov. (ug/L)	% Recovery	MSD Recov. (ug/L)	% Recovery	RPD	QC Limits RPD	Rec.
Aluminum	10000	ND	8280	83	8440	84	2	20 75-125	
Antimony	50	ND	39.3	79	37.1	74 *	6	20 75-125	
Arsenic	25	ND	25.4	102	24.5	98	4	20 75-125	
Barium	5000	ND	5370	107	5370	107	0	20 75-125	
Beryllium	4.0	ND	4.72	118	4.50	113	5	20 75-125	
Cadmium	10.0	167	182	NC	182	NC	NC	20 75-125	
Calcium	1000	435000	447000	NC	438000	NC	NC	20 75-125	
Chromium	1000	ND	910	91	900	90	1	20 75-125	
Cobalt	1000	470	1290	82	1290	82	0	20 75-125	
Copper	1000	ND	980	98	980	98	0	20 75-125	
Iron	1000	2190	3080	89	3100	91	2	20 75-125	
Lead	25	102	136	NC	138	NC	NC	20 75-125	
Magnesium	250	4300	4400	NC	4300	NC	NC	20 75-125	
Manganese	1000	350	1400	105	1410	106	1	20 75-125	
Mercury	5.0	ND	4.85	97	4.94	99	2	20 75-125	
Nickel	1000	ND	1030	103	1030	103	0	20 75-125	
Potassium	1000	4200	5300	110	5200	100	10	20 75-125	
Selenium	25	ND	16.1	64 *	15.7	63 *	3	20 75-125	
Silver	1000	ND	960	96	950	95	1	20 75-125	
Sodium	250	3100000	3200000	NC	2800000	NC	NC	20 75-125	
Thallium	25	ND	ND	MI	ND	MI	MI	20 75-125	
Vanadium	10000	ND	7680	77	7670	77	0	20 75-125	
Zinc	250	440	620	72 *	620	72 *	0	20 75-125	

QA/QC FOR BTU, ASH, MOISTURE, SULFUR and CHLORINE

Sample 00913 was chosen for the duplicate analysis for the drum liquid samples that were analyzed for BTU, and ash. The relative percent differences (RPDs), listed in Table 2.56, were 0 (zero) and 12. Both results were within the acceptable QC limits.

Sample 00912 was chosen for the duplicate analysis for the drum liquid samples that were analyzed for moisture. The RPD, also listed in Table 2.56, was 16. The result was within the acceptable QC limit.

Non-REAC sample AB42470 was chosen for the drum liquid samples that were analyzed for sulfur. The RPD, also listed in Table 2.56, was not calculated because sulfur was not detected in either analysis.

Non-REAC sample AB 42469 was chosen for the drum liquid samples that were analyzed for chlorine. The RPD, also listed in Table 2.56, was 4. The result was within the acceptable QC limit.

Table 2.56 Results of the Duplicate Analysis
for the Drum Liquid Samples
WA # 0-098 Pier Drum

Parameter	Sample	Units	First Analysis	Second Analysis	RPD	QC Limit
BTU	00913	BTU/lb	5470	6177	12	20
Ash	00913	%	0.26	0.26	0	20
Water	00912	%	53	62	16	20
Sulfur	AB42470	%	ND	ND	NC	20
Chlorine	AB 42469	%	55.6	53.3	4	20

CHAI, JF CUSTODY RECORD

Project Name:

Pier Drive

EPA Contract 68-C4-0022

Project Number:

3347 400010005

RFW Contact:

Law Lewis

Phone: 908) 324 2070

No: 00065

SHEET NO. 6F /

013055-

Sample Identification

Analyses Requested

[illegible]

Special Instructions:

Soil 34111 gals for 100 in 40 cm dia
Water 100 gal for 100 in 40 cm dia
Oil 100 gal for 100 in 40 cm dia
Air 100 gal for 100 in 40 cm dia

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
3 / Analysis	Samuel H. Hoff	20 June 95	B. Lewis	11/30/95	1:50	1 / Analysis	B. Lewis	1/30/95	C. Lewis	1/30/95	1437
			B. Lewis	11/30/95	1:50	1 / Per 1 R.B.	B. Lewis	2/3/95	-	2/3/95	8:30 AM
	J. L. Lewis	21/6/95	B. Lewis	1/30/95	1:50	1 / Metals	B. Lewis	2/7/95	W. J. Lewis	2/6/95	8:00 AM

REAC, Lison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Pro Drum
Project Number: 334740000018
RFW Contact: By Lewis Phone: 808 321 4200

95-01-55-9
No: 000066

SHEET NO. 1 OF 1

013095

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservation	VOL	BNA	Post/ACB	Labels
636	000911	Quarry #1 8/94	DS	10/10/95	1					
637	000912	REAC #1	DL	10/10/95	1					
638	000913	REAC #2	DL	10/10/95	1					
639	000914	REAC #4	DL	10/10/95	1					
640	000915	REAC #5	DS	10/10/95	1					
641	000916	REAC #5.5 10/31/95	DS	10/31/95	1					

Special Instructions:

* TCLP

Matrix: SD - Sediment DS - Drum Solids DL - Drum Liquids X - Other
PW - Potable Water GW - Groundwater SW - Surface Water SL - Sludge
S - Soil W - Water O - Oil A - Air

Chlorine 8 Marshes
8 Effluent 8 Marshes
8 Sulfur ASH BTU

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #
Temp. Amisic Cool Yes No
Samples Intact Yes No
Properly Preserved Yes No

Items/Reason	Relinquished By	Date	Received By	Date	Time
67 Analytes	Amisic	10/30/95	B Lewis	11/30/95	3:50
8					
8					
2					

CHAIRMAN OF CUSTODY RECORD

Vier D am

Project Number: 03347040201009801

hone: 4565

SHEET NO. OF

Sample Identification

TTAC Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Metals	BNA	Pest/PCB	Vol's
516	AD00641	MW-N	W	1/11/95	2	FINB3/40C	X			
517	CD00641	MW-N			2	PC		X		
518	EF00641	MW-N			2				X	
519	GH00641	MW-N			3					X
520	BC00645	Field Bank			2					X

Matrix:

Special Instructions:

	Sediment	PW - Potable Water	S - Soil
GD - Groundwater	Drum Solids	GW - Groundwater	W - Water
OS - Oil Solids	Drum Liquids	SW - Surface Water	O - Oil
DL - Drums	Other	SL - Sludge	A - Air

inter A - metals
B - metals fitted
separate analysis

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time
A/H/Andyia	Rogerson	1/12/85	Michael Van Cuy	1/17/85	11:00
V/votals					
2 FNA for bus					
3 VOA					

FORM #4

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

Project Name: _____
Project Number: _____
RFW Contact: _____

Peter Vran
0334704020 / 009801
L. Lemus Phone: 4261

No: 03670

SHEET NO. OF _____

Sample Identification

Sample Identification				Date Collected	# of Bottles	Container/Preservative	Analyses Requested			
EAC #	Sample No.	Sampling Location	Matrix				Metals	BNA	PBB/Pest	VOA's
5105	AB00635	MW-5	W	1/11/85	3	HNO ₃ /4°C	X			
5106	LD00035				3	4°C		X		
5107	GH00035				3					
5108	GH00035				3		X			
5109	AB00639	West Flowville			3	HNO ₃ /4°C		X		
5110	AB00639				3	4°C			X	
5111	FF00037				3		X			
5112	GH00037				3	4°C/HNO ₃		X		
5113	AD00640	Field Blank			3	4°C			X	
5114	CD00640	Field Blank			3					
5115	EF00640	Field Blank			3					
5116	GH00640	Field Blank			3					

Special Instructions:

Special Instructions: 2 liter bottles 09900 missing. (wv)

Matrix:	PW -	Water	S -	Soil
Sediment	GW -	Groundwater	W -	Water
Drum Solids	SW -	Surface Water	O -	Oil
Drum Liquids	SL -	Sludge	A -	Air
Other				

A - metals
 B - metals
 Filtered
 Separate analysis

FOR SUBCONTRACTING USE ONLY

[illegible]

REAC, Ec. n, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Field Work
Project Number: 03347 240 001 0293 01
RFW Contact: K Lewis Phone: 4261

No: 03671

SHEET NO. OF 10

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Metals	BNA	Asst/PCBs	VOA's
496	AB00636	NW-DUR	W	1/4/95	2	HNO3/4°C	X			
497	CD00634				2			X		
498	EF00634				2				X	
499	GH00636				3					X
500	AB00638	N.P.T			2		X			
501	CD00638				2			X		
502	EF00638				2				X	
503	GH00638				3					X

Special Instructions:

A - metals
B - metals if filtered

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Separate analysis

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
			Michael W. C. C.	1/13/95	11:00	2 - metals	Michael W. C. C.	1/13/95	Michael W. C. C.	1/13/95	2:30
						4 - BNA PCBs	Michael W. C. C.	1/13/95	Michael W. C. C.	1/13/95	14:10
						2 - VOA	Michael W. C. C.	1/13/95	Michael W. C. C.	1/13/95	14:23

CHAIN OF CUSTODY

CORD/LAB WORK REQUEST

Roy F. .ston, Inc.
REAC, Edison, N.J.
EPA Contract 68-03-3482

Project Name: Pier Drum
Project Number: 03347-040-0098-01
RFW Contact: B. Hoffmann Phone: X4243

No: 10027

ANALYSES REQUESTED

SAMPLE IDENTIFICATION

SHEET NO. 1 OF 1

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TEL P Metals	TEL P BNA	TEL P PCB
574	A00525	A00642	W	1/18/95	1 ea	1L Poly/4°C HNO ₃	X	X	X
575	B00525	"	"	"	"	1L Amber/4°C			
576	C00525	"	"	"	"	1L Amber/4°C			X
577	A00526	A00643	"	"	"	1L Poly/HNO ₃	X	X	
578	B00526	"	"	"	"	1L Amber/4°C			
579	C00526	"	"	"	"	1L Amber/4°C			X
580	A00527	A00644	"	"	"	1L Poly/HNO ₃	X	X	
581	B00527	"	"	"	"	1L Amber/4°C			
582	C00527	"	"	"	"	1L Amber/4°C			X

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Special Instructions: D, E, F = MS/MSD

PW - Potable Water	S - Soil
GW - Groundwater	W - Water
SW - Surface Water	O - Oil
SL - Sludge	A - Air

Items/Reason	Relinquished By	Date	Received By	Date	Time	Relinquished By	Date	Time
All Analysis: B. Hoffmann	1/18/95 Michael W. Hoffmann	1/18/95 14:30	3/protocols	1/18/95 14:30	3:30	Michael W. Hoffmann	1/18/95 15:00	3:30
			6/protocols BNA	1/18/95	15:00	6/protocols BNA	1-18-95	

WESTON
 MANAGERS
Analab, Inc.
 205 Campus Plaza I
 Edison, NJ 08837

Roy F. Weston, Inc.
 GSA Raritan Depot
 Building 209 Annex (Bay F)
 2890 Woodbridge Avenue
 Edison, New Jersey 08837-3679
 908-321-4200 • Fax 908-494-4021

January 17, 1995

Attn: Joe Larusso

Project # 3347-040-001-0098, Pier Drum

As per Weston REAC Purchase Order number 08-31480, dated 01/13/95, please analyze samples according to the following parameters:

Analysis/Method	Matrix	# of samples
VOA/CLP compounds	Soil	3
TCLP VOA/1311	Soil	3
VOA/CLP compounds	Drum solids	5
BNA/CLP compounds	Drum solids	5
Pest/PCB/CLP compounds	Drum solids	5
Metals/CLP compounds	Drum solids	5
Corrosivity/SW-846 Chapter 7	Drum solids	5
Ignitability/SW-846 Chapter 7	Drum solids	5
Reactivity/SW-846 Chapter 7	Drum solids	5
Ash Content/ASTM D-189	Drum solids	5
% Sulfur/ASTM D-129-64	Drum solids	5
% Chlorine/ASTM D-808-81	Drum solids	5
Total Organic Halogens/SW-846 9020 A	Drum solids	5
BTU/ASTM D-240-76/2015-77	Drum solids	5
TCLP VOA,BNA,Pest/PCB,Metals/1311 Analyze for Compounds in CLP.	Drum solids	5
Data package <u>including diskette deliverables</u> as per attached Deliverables Requirements		

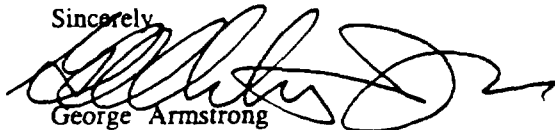
2 2 1421

Samples are expected to arrive at your laboratory on January 13, 1994. All applicable QA/QC (MS/MSD) analysis will be performed on each of our sample matrix. Preliminary results tables including MS/MSD's plus a signed copy of our Chain of Custody is due at REAC 10 business days from sample receipt, with the complete data package due 21 business days from time of sample receipt. The complete data package must include all items on the deliverables checklist. If your laboratory cannot meet the delivery date, please give best delivery date possible.

ALL ORGANIC EXTRACTIONSON SOLIDS IE: BNA, PEST/PCBMUST BE BY SOXHLET EXTRACTION

Should any questions or problems arise concerning this project, please call **John Johnson** at (908) 321-4248 or fax to (908) 494-4020. Any contractual question, please call Cindy Snyder at (908) 321-4296. Thank you

Sincerely,



George Armstrong
Data Validation and Report Writing Group Leader
Roy F. Weston, Inc. / REAC Project

GA: jj Attachments

cc. R. Singhvi
G. Powell
Central File
0098\non\mem\9501\sub\0098con

V. Kansal
Subcontracting File
M. Van Clef

C. Snyder
R. Lewis
G. Armstrong